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Ontario. Lands and Forests, Dep't.

# REPORT

1911/12 - 1914/15

OF THE

## Minister of Lands, Forests and Mines

OF THE

### PROVINCE OF ONTARIO

For Year Ending 31st October

1912

4 vol. in 1

PRINTED BY ORDER OF  
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# CONTENTS.

## Appendices:

	PAGE
No. 1. Statement of Officers and Clerks in the Department .....	2
2. " Crown Lands Agents and Homestead Inspectors .....	5
3. " Lands sold and Leased and Collections .....	7
4. " Gross Revenue .....	8
5. " Receipts Considered as Special Funds .....	9
6. " Gross Disbursements .....	10
7. " Expenditure on Account of Various Services .....	33
8. " Revenue from Woods and Forests .....	34
9. " Patents, etc., Issued .....	35
10. " Timber Cut and Amounts Accruing for Dues, etc. ....	36
11. " Work Done in Military Branch .....	38
12. " Letters Received and Mailed .....	38
13. " Locations, etc., under Free Grants Act .....	39
14. " Municipal Surveys Ordered .....	44
15. " Municipal Surveys Confirmed .....	45
16. " Crown Surveys in Progress .....	46
17. " Crown Surveys Completed .....	47
18. Surveyor's Report, Line Between Districts of Temiskaming and Nipissing from South Angle of Township of Cassels East to Lake Temiskaming .....	49
19. " Township Outlines, Districts of Algoma and Sudbury .....	50
20. " Township Outlines, District of Sudbury .....	52
21. " Township Lines, District of Sudbury .....	55
22. " Outlines of Townships West of Lake Timagami and Lady Evelyn Lake, District of Sudbury .....	56
23. " Outlines of Townships of Lowther, Templeton and Talbot, District of Algoma .....	58
24. " Township Outlines, District of Temiskaming .....	60
25. " Township of Gill, District of Algoma .....	62
26. " Township of Kendall, District of Algoma .....	63
27. " Township of Way, District of Algoma .....	65
28. " Re-survey of Part of Township of Mattawan, District of Nipissing .....	68
29. " Township of Nansen, District of Temiskaming .....	69
30. Report of Superintendent, Algonquin National Park .....	71
31. " " Rondeau Provincial Park .....	74
32. Supplementary List of Licensed Cullers .....	76
33. The Abitibi Pulp Limit Agreement .....	77
34. Agreement for Sale of Townships of Kendrey and Haggart .....	83
35. Instructions to J. F. Whitson .....	88
36. Report of J. F. Whitson on Construction of Roads in Northern Ontario..	91





# Report of the Minister of Lands, Forests and Mines of the Province of Ontario

For the Year ending 31st October, 1912

To His Honour THE HONOURABLE SIR JOHN MORISON GIBSON, K.C.M.G.,  
*Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit for the information of your Honour and the Legislative Assembly a report for the fiscal year ending 31st October, 1912, of the management, etc., of the Crown Lands of the Province.

## CLERGY LANDS.

The area sold during the year was 101 acres, the value of which was \$110. The collection on account of sales of Clergy Lands was \$1,565.92. (See Appendix No. 3, page 7.)

## COMMON SCHOOL LANDS.

The value of these lands sold during the year was \$94. The collection on account of these and former sales was \$7,121.25. (See Appendix No. 3, page 7.)

## GRAMMAR SCHOOL LANDS.

There were no sales. The collection on account of former sales was \$292.55. (See Appendix No. 3, page 7.)

## UNIVERSITY LANDS.

The area of these lands sold during the year was 11,890 acres for \$6,855.80. The collection on account of these and former sales was \$4,263.39. (See Appendix No. 3, page 7.)

## CROWN LANDS.

There was sold during the year for agricultural and town site areas 349,319 acres for \$272,233.08. The collection on account of these and former sales was \$218,710.29. There was sold for mining purposes 18,971 acres for \$45,552.18. There was collected on account of these and former sales \$51,634.48.

There was leased for mining purposes 16,711 acres for \$17,316.65. There was collected on account of these leases and those of former years \$33,098.34. There was leased of Crown Lands an area of 15,793½ acres for \$2,157.50. There was collected on account of these and the leases of former years \$18,931.82.

The total area of Crown Lands disposed of by sale and lease during the year was 412,790½ acres for a value of \$344,319.21. The total collection on account of the sales, leases, etc., was \$335,645.04. (See Appendix No. 3, page 7.)

The townships of Kendry and Haggart, situated on the Transcontinental Railway thirty miles west of Cochrane, containing about 98,000 acres, were sold at the price of \$1 per acre cash to a company, subject to certain terms as to development and settlement. A copy of the agreement with this company will be found in appendix No. 34, page 83, and will speak for itself.

The Department, being of opinion that centres of industry affording markets for natural products and creating employment for labour, are important aids in the opening up and settlement of the new country, recommended to the Government that these two townships should be sold to a company composed of energetic and wealthy men, but subject to conditions which, while conserving the interests of the public, would become an industrial centre. The development already made is large and important, and fully justifies the expectations formed as to the good results which would be obtained by selling these townships. Over \$60,000 has been expended in the erection of buildings, opening up of roads, etc. Hotels have been erected, and a large sawmill is in operation—the latter affording a supply of merchantable lumber purchasable by settlers at reasonable prices—the absence of which convenience was one of the greatest drawbacks to the settlement of that country; for, without lumber to erect buildings, progress is very slow, and people are not able to provide homes for their families.

Not only is there now a supply of lumber, but the company is purchasing pulp wood and other kinds of timber from the settlers which enables them to stay on their lands during the winter season instead of being obliged to seek employment away from home.

In further pursuance of the policy of encouraging industries in this immense region, a pulp concession was laid out and tenders were called for. The successful tenderers were Ogilvie and Anson, now the Abitibi Pulp and Paper Company, Limited, and they are actively engaged in developing their water power, erecting mills, clearing land, etc. When this industry is in complete running order considerably over half a million dollars will have been spent, and at least 250 hands kept employed for ten months in the year. This will cause a large expenditure for wages; will create markets for the natural products, and will enable the settlers to dispose of their spruce timber removed in clearing their land, at prices which will afford them some profit for taking out their pulpwood. The lands covered by this pulp concession are not withdrawn from sale or settlement, so that there is no monopoly or tying up of land. This development is on the Abitibi River, at Iroquois Falls, and a branch of the Temiskaming & Northern Ontario Railway is being built from Iroquois Falls to the mills. The expectation is that these two large industries will be powerful incentives to settlers to take up land in that country, and the creation of other industries further west along the Transcontinental will encourage people to come in until there is a continuous settlement all along the line.

These developments, of course, are in the great clay belt, which continues to attract more attention than any other part of the Province, warranting the belief that in the immediate future we shall see a great expansion in that region. It is expected that by next fall the Algoma Central Railway will be running as far north as Hearst on the Transcontinental. Another railway from Bruce Mines is also assured, which will strike the Transcontinental midway between Cochrane and Hearst. The Canadian Northern, lying midway between the Transcontinental and the Canadian Pacific Railway, will be running within a short period. When the



Transcontinental Railway Commission takes over their road from the contractors, and trains are run on proper schedules and reasonable fares, and the carriage of freight brought down to some permanent basis, then we may expect active interest to arise and a steady inflow of settlers to take place.

During the year the following townships in the clay belt have been opened for settlement: German, Beatty, Stock, McCart, Bond, Playfair, Calvert, Leitch, Blount, Calhoun, Calder, Pyne, Fox, Fournier, and Kennedy. During the year ended the 31st of October last 250 settlers took up land in the New Liskeard Crown Land Agency, about 175 in the Englehart Agency, 365 in the Matheson Agency, and 600 in the Cochrane Agency, while many people have gone on and selected lands, but had not, on the 31st of October, been regularly entered. So that before the end of the year probably 1,500 settlers had selected and entered upon their lands in that region.

It is intended to place a Crown Land Agency at the town of Hearst and open townships there for sale and settlement early in the coming year. It is safe to say that ultimately the region extending from the Quebec boundary on the east to the boundary of the Province of Ontario on the west, and from the C. P. R. north to the height of land, will afford homes for millions of people and support them in comfortable circumstances on their farms. In addition, large towns are certain to spring up, which will afford markets for a good proportion of what the farmers raise.

This may seem a large prophesy, but when it is remembered that the clay belt is as great in area as the present settled area of Ontario, there is no exaggeration in the statement.

#### FREE GRANTS.

In other newer parts of the Province considerable settlement has taken place. While the other districts have been over-shadowed in point of interest by the clay belt yet there has been good progress made. In the Rainy River Free Grant District and in the Thunder Bay Free Grant District there are considerable areas of good land, and settlement is flowing in. In the Port Arthur Free Grant Agency 500 settlers have been located during the year. In the Rainy River Free Grant Agency 366 have been located. In the Dryden Agency 158 settlers were located. Altogether nearly 1,700 free grant locations were taken up by intending settlers, who located and purchased in addition about 262,000 acres. During the year, 1,095 locatees completed their settlement conditions and obtained their patents.

The following townships were opened under the Free Grant Act during the year ending the 31st of October, 1912:

Baldwin (part), Lumsden (part), both in the District of Sudbury.

Ware (part) in the District of Thunder Bay.

#### MILITARY GRANTS.

The total number of military certificates issued to date, authorizing veterans to select land under the Act 1 Edw. VII., cap. 6, is 13,996.

The new locations made during the year numbered 139, making in all to the end of the year 7,871, and in 14 cases location certificates were applied for and issued.

Twenty-one certificates were surrendered to the Crown for the \$50.00 commutation, making in all 3,217 surrendered.



During the year 53 certificates were surrendered to be applied in payment of lands purchased from the Crown, a total of 668.

The number of patents that were issued for lands located were 997, being a total of 5,560 patented in all.

The total number, therefore, of certificates that have now been redeemed is 11,756, leaving 2,240 still outstanding.

The locatees of all lands granted under this Act, must apply for their patents for such land before ten years have expired from date of location. If this application for patent is not made within ten years, then the land comes under the settlement regulations, and unless the settlement duties are proceeded with, the locations are liable to cancellation.

As the first locations, under this Act, were made in April, 1903, the ten years exemption, as stated above, is expiring on many of these locations.

### THE MINING INDUSTRY.

*Gold.*—For the first time in the history of Ontario there was a substantial production of gold. In 1911 the output had a value of \$42,637.00; in 1912, of \$2,114,086.00. The greater part came from the mines of the Porcupine district, principally from the Hollinger and Dome, which came into full production early in the year. Other mines at Porcupine, whose stamp mills are under construction or actually at work are McIntyre, Vipond, Jupiter, and McEnany. The St. Antony mine at Sturgeon Lake, near the junction of the Transcontinental railway and the Lake Superior branch, and the Cordova in the county of Peterborough, yielded considerable bullion. The outlook for 1913 is for a much larger production at Porcupine. The other camps undergoing development, such as Larder Lake, Kirkland Lake, Swastika, etc., have not yet reached the stage of steady output.

*Silver.*—Cobalt well maintained its rate of production, the yield of silver being 30,719,883 fine ounces, worth \$17,671,918, as against 31,507,880 ounces worth \$15,953,895 in 1911. The total production since the opening of the mines in 1904 has amounted to about 156 million ounces, of a value of about 82 million dollars. A notable feature of the industry at Cobalt is the tendency towards final treatment of the ore on the spot. At first the high grade ore was shipped as mined to smelters in the United States, the low grade going to the dumps. Refining works came into being at several points in Ontario, and concentration plants became common at Cobalt, resulting in great saving of freight and the recovery of silver from ores too low in grade to admit of shipment. The third stage was the establishment of plants for the refining of the silver and the production of merchantable bars. The Buffalo and Nipissing mines are now equipped for reducing their entire output, both of high grade and low grade ore, to silver bullion.

The largest producers during the year were the Nipissing, Coniagas, La Rose, Crown Reserve, McKinley-Darragh-Savage, Kerr Lake, Buffalo, Townsite Temiskaming, O'Brien. Three mines in Gowganda and one in South Lorrain were in active operation. The principal by-product of the Cobalt mines is Cobalt oxide, of which these mines are now the chief, practically the only, source of supply. This article is used to impart to chinaware and porcelain goods the beautiful color known as cobalt blue. Another by-product is white arsenic, and a third, nickel oxide, both of which are utilized in the arts.

*Nickel and Copper.*—The Sudbury mines yielded 22,421 tons of nickel and

11,116 tons of copper, being the largest production yet. The nickel in the matte was valued at \$4,722,040, and the copper \$1,581,062. The producing companies are two in number—the Canadian Copper Company and the Mond Nickel Company. The former has been enlarging and improving its plant, and the latter has erected new smelting works at Coniston, east of Sudbury, to which it purposes to remove early in 1913. A third company, the Dominion Nickel Copper Company, has sold its holdings to English interests, who are likely to enter upon a vigorous campaign of production. Extensive diamond drill borings have revealed the presence of very large reserves of ore at the Frood, Murray, and other mines.

*Iron Ore and Pig Iron.*—Iron ore to the extent of 117,357 tons valued at \$238,884 was raised from the Helen, Moose Mountain and Bessemer mines. Concentration plants are being erected at Moose Mountain and Magpie. Of pig iron the output was 589,593 tons as compared with 526,610 tons in 1911, the number of blast furnaces in operation being eight.

*Other Products.*—Brick, stone, and Portland cement were produced in increased quantities, the whole production of building materials amounting in value to \$8,735,575. Petroleum continues to decline in yield, and natural gas to increase, the value of the former in 1912 being \$344,537, and of the latter \$2,268,022. Salt, gypsum, mica, graphite, corundum, talc, feldspar, iron pyrites, quartz and the other materials on the long list of minor minerals comprised in the mining industry of the Province were produced on about the usual scale, several of them providing the basis of industries of local importance.

The aggregate value of the minerals and mineral products for 1912 was \$48,341,612, as compared with \$41,976,797 in 1911, an increase of 13 per cent. In the development and settlement of the northern portions of Ontario the mining industry is of great importance, as may be realized from the fact that it gives employment to about 20,000 men and pays out in wages over 12 million dollars yearly.

#### COLLECTIONS.

The total revenue of the Department from all sources was \$2,900,204.74. Of this \$218,737.29 came from agricultural and town sites, and included \$98,838. the purchase price of the Townships of Haggart and Kendry. \$36,842.65 was derived from town sites; mining lands, \$51,634.48; rent—leases, \$52,030.16; miners' licenses, permits, and recording fees, \$107,162.70; royalties, \$250,145.65; supplementary revenue tax, \$190,875.53; from woods and forests the revenue was \$1,985,662.78, covering such items as bonus, \$540,702.85; timber dues, \$1,339,957.12; ground rent, \$96,262.81; transfer fees, \$8,740. (See Appendix No. 4, page 8.)

#### DISBURSEMENTS.

The total expenditure of the Department for ordinary services was \$603,782.31. Some of the principal items were: Agents' salaries and disbursements, \$15,374.84; homestead inspectors, \$10,524.41; Crown timber agents, \$27,630.94; wood ranging and estimation of timber, \$91,753.06; fire ranging, \$124,483.74; Forest Reserves, fire ranging, etc., Temagami Reserve \$46,394.96, Metagami Reserve, \$8,723.86; Mississauga Reserve, \$11,965.01; Nepigon Reserve, \$8,568.17; Quetico Reserve, \$4,407.95; Mines and Mining, \$32,129.01; Mining Recorders, \$27,296.75; Surveys, \$123,016.46; Refunds, \$15,625.44; Contingencies, lands, and forests, \$25,815.29; Bureau of Mines, \$9,188.67.

There was expended under the direction of the Department the sum of \$233,534.29. Of this the largest expenditure was in connection with the Northern Development, under 2, George V., which was \$193,082.80; exploration of the District of Patricia, \$10,000; parks, \$24,471.39. (See Appendices Nos. 6 and 7, pages 10 to 33.)

#### WOODS AND FORESTS.

The total revenue accrual from woods and forests during the year ending the 31st of October, 1912, was \$2,068,060.38, which amount is \$83,197.78 less than the accrual for last year.

The falling off was principally in the receipts from bonus, which were \$96.968 less than the receipts for bonus last year.

The revenue collected on account of the above accrual and those of former years was \$1,985,662.78, or \$274,225.91 in excess of the revenue collected last year.

The principal increases were in timber dues \$166,673.37, and in bonus \$113,884.14.

The mileage under license last year was 996 miles less than that of the previous year. The reason for this was that certain licensees had not paid up their ground rent or were indebted for dues, which prevented the issue of their licenses. 307 miles were also surrendered as having been cut out, and were withdrawn from license.

The output of pine sawlogs, boom timber and square timber brought into feet board measure equalled 487,838,666 feet board measure, which is 96,425,439 feet below the output of 1911.

The output of timber other than pine showed an increase of 24,093,160 feet over last year. There was also an increase in the pulpwood of 49,612 cords. The most notable expansion was in railway ties. The quantity taken out last year was 4,270,832 ties. The quantity taken out this year was 5,704,459 ties, showing an increased output for the year of 1,433,627 ties.

Several berths in the Rainy River, Thunder Bay and Kenora Districts that had been damaged by fire or cut over in previous years were sold by tender.

The only other timber sale held during the year was of two berths on the Jocko River, each having an area of 25 miles, which were in a dangerous position and on which the timber had reached its maturity, and it was considered wise to sell them so as to get the value of the timber. The sale of this timber established a record for price. The pine timber on Berth No. 1 was sold for \$13.26 per thousand feet board measure in addition to \$2 dues; and the pine timber on Berth No. 2 was sold for \$12.10 per thousand feet board measure in addition to \$2 dues. In the disposal of these berths it was determined to insert a condition in the terms of sale requiring the licensees to remove all limbs, brush, and other debris arising from the lumbering operations under the direction of an officer appointed by the Department of Lands, Forests and Mines. A deposit was required of \$1,000 per mile in each case, which desposit is held as security for the performance of all conditions of sale. The Forester for the Province, Professor Zavitz, was requested to visit the locality, and a special ranger was placed in charge of the cutting to see that the conditions with respect to the disposal of the debris were carried out. The timber will be culled and measured by scalers appointed by the Department.

The year 1912 was, on the whole, a fairly good year for lumbermen, both as regards demand and prices. Some years ago, when our lumbermen looked chiefly



if not altogether to the United States market for their sawn lumber, and the duty was \$2 per thousand feet B.M., our inferior grades were shut out of the American market and became unsaleable, and had to be piled up at the mills. Since then we have gone a considerable distance. The expansion of our own country and the enormous building that is going on of towns, cities and railway construction, are such that our lumbermen no longer need look to the United States market, our own markets being able to use up most of the lumber taken out at a fairly good price, not only for superior grades, but for the lower grades as well.

Speaking of the state of the market during the past year an excellent authority says: "The lumber market was firm, generally speaking, throughout 1912; prices showing on the whole an increase in tendency. The demand for lumber for building purposes was probably never so large, and in the year past the United States demand was good. In Ontario the year appears to have been one of steady prices for medium qualities, but low grades also advanced, as did some of the higher grades." The advance in prices was not confined to pine, but all varieties of timber shared in the increased value. Hemlock particularly, which had been somewhat of a drug a year or so ago, became scarce and more than shared in the general increase of prices. The outlook for the coming winter is of even a smaller production of pine lumber than during the year last past.

#### FIRERANGING.

There were on duty during last summer: In forest reserves, 228 firerangers; on railways, 193; on lands of the Crown 111, which, with 10 chiefs, makes a total of 542 firerangers employed.

The timber licensees are required to place rangers on their limits and pay them. Under this arrangement there were on duty on licensed lands during the summer 350 rangers and 8 supervisors, making a total staff in the forest last summer of 900.

The Department divides the licensed territory into districts and places a supervising ranger in charge of each district, whose duty it is to see that all limits are properly protected by having firerangers on them. The supervising ranger visits all firerangers in his district and advises them. Should he find any limit unprotected he reports the fact to the Department, which takes the matter up with the licensee. If the licensee fails to put on rangers after notice the Department puts them on and charges the expense against the timber limit, and requires that the licensee pay it before he obtains a renewal of his license. The summer of 1912 was a very wet one, in consequence of which there were no fires of any moment.

#### FOREST RESERVES.

*The Temagami Forest Reserve*, which contains a large quantity of valuable pine timber, covers an area of about 6,000 miles. The Village of Gowganda, a mining centre, is in this Reserve, and there is considerable mining and prospecting going on in different localities. It has become a great summer resort, having innumerable lakes and being easily accessible by the Temiskaming and Northern Ontario Railway. Owing to the number of miners, prospectors, tourists, hunters and others moving about through this Reserve, a large staff of firerangers has to be kept on duty in the summer months. During the past summer one chief ranger and three assistant rangers were on duty in this reserve, with a staff of 137

firerangers. Owing to this close supervision and the season being a wet one, no forest fires took place.

*The Mississaga Reserve* contains an area of about 3,000 miles. It is called after the large river whose tributaries meander through it. There is a large quantity of first class pine in this Reserve, which, owing to its quality, accessibility, and short drive to Lake Huron, is extremely valuable. Some few years ago a considerable quantity of pine in this reserve was damaged by fire, and we sold it, obtaining as high as \$13.37 per thousand feet board measure, including dues. There have been no serious fires in this reserve since. The fireranging staff consists of one chief and 32 firerangers under him. These men are distributed in such manner as to have complete supervision of the routes of travel through the Reserve, the lumbering operations, etc. There is no mining or settlement in or near this Reserve. The only danger, therefore, would be from tourists, explorers and lumbermen, but these are carefully looked after by the ranging staff.

*The Nepigon Reserve* is the largest in the Province, having an area of 7,300 miles. There is no large quantity of pine timber in this Reserve, but there is an illimitable quantity of pulpwood, consisting of spruce, jackpine, and poplar. The Nepigon River is the most celebrated trout stream on the continent, and visitors from all over the United States come to enjoy the sport afforded by its waters. Great care is exercised by rangers along the portages and camping places to see that fires are extinguished by campers and others using the stream. The large lake from which the Reserve takes its name is one of the most beautiful lakes in Canada—60 or 70 miles long by about 35 miles wide. It contains a large number of islands, and is becoming better known each season. Here is one of the oldest Hudson Bay Company posts—Nepigon House—which is continually referred to in the history of the fur trade in its very earliest stages in that immense region. Two of the three transcontinental railways run through this Reserve, viz., the Grand Trunk Pacific and the Canadian Northern, while the Canadian Pacific Railway runs along its southern boundary. Great care was exercised this past season along the construction work of the Canadian Northern and the Grand Trunk Pacific. In the Reserve proper there was a chief ranger and 20 firerangers on duty under him; and in addition there were two firerangers on every two miles of railway construction on the two railways being built through the Reserve. The Canadian Northern Railway comes into the Reserve at what is now called Orient Bay, which is at the east end of the lake. It is in contemplation to make this a divisional point and erect a summer hotel there. There have been no serious fires in this reserve of late years, notwithstanding the thousands of employees on the railway which built through it. When the two railways are finished and in running order—one touching it at the north end and one at the south—it will become one of the greatest summer resorts in Canada.

*The Quetico Reserve* is situated in the Rainy River District abutting on the boundary waters between Canada and the United States. It contains an area of 1,500 miles and there is a very large quantity of good pine in it. There is no settlement in or near it and few prospectors. A few timber berths were sold before the Reserve was created, and some lumbering has been carried on. There are two or three Indian Reserves in this Reserve and an Indian population of 123. The Quetico Reserve is a harbour for game, and is well protected by a permanent staff. It lies immediately north of a game reserve on the United States side of the waters. There was on duty in this Reserve last summer a chief ranger and fourteen fire-

rangers under him, who looked after the protection of the timber from trespass or fire.

*The Eastern Reserve* is situated in the County of Addington and has an area of 100 square miles. This Reserve was originally covered by timber licenses and the townships composing it were opened for settlement. When the Reserve was set apart a surrender of the timber licenses was taken, but where settlement existed the patentees or locatees remained in occupation; consequently there are a number of settlers scattered through the Reserve. The object of setting apart this Reserve was to see how a cutover limit adequately protected would reforest. The experiment has been interesting as well as satisfactory. Growth has been luxuriant, and has evidenced that in course of time this Reserve will produce quantities of valuable merchantable pine, hardwood, hemlock, and other timbers. The Reserve is protected by one chief and six firerangers.

*The Sibley Reserve* contains an area of only 70 miles. It covers the great promontory at the entrance of Thunder Bay called Thunder Cape. This territory had been partly burnt over and it was set apart as a forest reserve so that it might be protected and grow up again. The result has been very satisfactory, as the point is becoming clothed again with timber. No fires have occurred in this Reserve.

There are two parks in the Province under Government control, the Algonquin and the Rondeau.

*The Algonquin National Park* has an area of 2,060 miles and covers the head waters of the Muskoka, Petewawa, Madawaska, Amable du Fond, South River, and some other minor streams. One of the important objects in setting aside this park was to keep the head waters of these large rivers clothed with timber instead of allowing them to be denuded. Another was to protect the game and animal and bird life generally. Another object was to afford a large forest area where people might get in touch with Nature and enjoy the benefits resulting therefrom, such as pleasant surroundings, good fishing, delightful canoeing through what may be described as a lacustrine paradise, and renewed health and strength; the quieting of the timber titles and bringing the territory back into the hands of the Crown so that the timber might be permitted to grow and be conserved for the use of posterity. The park is admired by everyone who visits it for its beauty. It is rapidly becoming a winter resort, where skating, snow-shoeing, and other Canadian recreations can be enjoyed to the full. The protection afforded the game has caused it to increase so rapidly that thousands of dollars have been obtained by taking a certain number of beaver, otter, mink, etc., and disposing of them by public sale.

*Rondeau Park.*—This park has an area of 8 square miles. It is beautifully situated, lying as it does between Rondeau Harbour and Lake Erie. Here is to be found the finest piece of original forest in the Province. Magnificent specimens of trees that are almost extinct are growing here, such as black walnut, butternut, sycamore, etc. This park was set apart to protect and conserve this particular forest and to create a harbour for game. It was also intended to afford a place where people from the surrounding country might have a recreation ground during the summer months. Many summer cottages have been erected. The park is a favorite resort for picknickers from towns in the vicinity. Driveways are built through it and there is a constant stream of automobiles. Ten years ago a few deer were placed in the park and they have been carefully protected. They have multiplied until they became a menace to the crops of the surrounding people and



it became necessary to kill off nearly one hundred of them, and \$800 was derived from the sale of the meat.

(For Superintendents' reports see Appendices Nos. 30 and 31, page 71 to 76.)

### RAILWAYS.

An additional staff of rangers had to be put upon the railways in the Province owing to increased construction. The Transcontinental runs through the Province north of the height of land on the Hudson Bay slope from the time it enters Ontario until it passes into the Province of Manitoba. In addition to the main line there is a branch from Fort William to Sioux Lookout. Considerable progress has been made in the construction of the Transcontinental, but it is still in the hands of the contractors and we have to look after the fireranging on it very closely.

The Canadian Northern is under construction from near Ruel west to Port Arthur, and from Ruel east to Pembroke, and a large staff of firerangers were kept on it.

The Algoma Central is under construction from Hobon to Hearst. On the Transcontinental the usual staff of rangers was on duty all summer.

On these railways we have placed four supervising rangers with two men on each ten miles under them. Their instructions were to keep a close watch over the habits and acts of the labourers. The Italians and other foreigners are notoriously careless in the use of fire, using it for smudges and for cooking—not only in the camp where they live, but wherever they sit down to lunch or smoke, and they are inveterate cigarette smokers and careless how they dispose of the partly unsmoked cigarette and where they throw down matches. The rangers are instructed to impress upon the foremen the necessity for warning their men to be very careful in the use of fire, and also to be sure to extinguish it when it has served their purpose, whatever that may have been. Where the labour is English-speaking the rangers warn them and give them directions and hand them a copy of the Fire Act. They also put up poster copies in Italian and English at all points where men congregate. By doing this and traversing their five-mile beats twice a day—once out and once back—they keep in touch with what is going on and enforce obedience to the regulations. We had no fires of any consequence on the Transcontinental last summer. This no doubt was, in a measure, due to the very wet season.

On the Canadian Northern from Ruel to Nepigon we put a ranger on every seven miles. The company had an engineer with a residency every seven miles, and one ranger was put in each residency, and the engineers and contractors were asked to see that they did their duty in patrolling the railway and render them every assistance they required. We had no fires of any consequence on this railway.

On the Algoma Central a staff of rangers was also on duty under similar instructions and no fires occurred there.

The railways that are in running order or partly in running order are the Canadian Pacific, the Canadian Northern, the Algoma Central, the Algoma Eastern and the Temiskaming & Northern Ontario.

On the Canadian Pacific we had one ranger from the Severn north, whose duty it was to take care of the block of pine timber that grows in the Township of Wood through which the railway runs. We had another ranger on the C. P. R. from Port Arthur west, his duty being to have supervision of the track to see where ties were being burnt or any fires taking place along the line, and wherever he finds a fire to get off the train at the next station and find out all particulars about it, and

see that it is extinguished. Considerable danger has existed from carelessness in the burning of ties that have been used up and pulled out of the track, and therefore it was thought expedient to put a travelling ranger on to see that care was exercised where fire was used for this purpose.

On the Canadian Northern, from Port Arthur to Rainy River there were also rangers placed, and no fires occurred.

On the Temiskaming & Northern Ontario Railway we had a staff of rangers from a short distance north of North Bay through the Temagami Forest Reserve. On this line the rangers follow the trains out of their districts or divisions with speeders, and great care is exercised as the railway runs through a dense body of pine. No fires occurred on this railway during the past season.

From Latchford north a considerable distance no firerangers are required, as the railway travels through a settled region.

Further up rangers are placed again in sufficient numbers to have close supervision of the railway and to see that the regulations are observed, and if any fires occur to extinguish them immediately.

As before stated, there were on railways during the past summer 193 firerangers and 9 chiefs, making a total staff of 202.

#### CULLERS' EXAMINATIONS.

Cullers' examinations were held at Kenora and North Bay. Twenty-two candidates were successful at these examinations and were granted certificates authorizing them to act as cullers.

(For list of cullers who passed at the above examinations see Appendix 32, page 77.)

(For complete list of licensed cullers see Minister's report for 1911.)

#### CROWN SURVEYS.

The following Crown surveys have been undertaken this year.

Instructions were given for subdivision of the following townships:

Township of Drayton, at Sioux Lookout, on the National Transcontinental Railway, in the district of Kenora.

Township of Mathieu, in the district of Rainy River.

Townships of McMillan, Mulloy, Gill, Studholme, Stoddart, Kendall, Way, and parts of the townships of Hanlan and Casgrain, in the district of Algoma.

Townships of Shackleton and Sargeant and parts of the townships of Nansen and Fauquier, in the district of Temiskaming.

Also for resurveys of parts of the townships of Pardee and Crooks, and the Dawson Road Lots, in the district of Thunder Bay, and Mattawan in the district of Nipissing.

Instructions were given for subdivision of the following townships:

ship outlines in the districts of Algoma, Nipissing, and Sudbury, the great majority of this work being along the lines of the Algoma Central and Hudson Bay Railway, north of the Canadian Pacific Railway, and along the line of the Canadian Northern Ontario Railway between Sudbury and Oba Junction.

Instructions were issued for survey of timber berths in the township of Mulligan, district of Temiskaming, also timber berth "G," in the district of Temiskaming.

Instructions were also issued for survey of town plot at Armstrong, in the district of Thunder Bay, and an addition to the town plot of Hearst, in the district of Algoma.

The reports of the surveyors so far as received and examined will be found in Appendices 18 to 29 inclusive, pages 49 to 70 inclusive.

#### MUNICIPAL SURVEYS.

On the petition of the Municipal Council of the Township of Williamsburgh, instructions were issued to survey the road allowance between the 7th and 8th concessions of the Township of Williamsburgh, from the east limit of lot 25, or the nearest undisputed monument, to the west limit of the township. Also on the petition of the Municipality of the Council of Marlborough, instructions were issued to survey the road allowance between the 6th and 7th concessions of the Township of Marlborough, in the county of Carleton, opposite lots 1, 2, 3 and 4, or as much farther as may be necessary to find an original monument and to define by permanent stone or other monuments the limits of the said road allowance. Also on the petition of the Municipal Council of the Township of Assiginack, instructions were issued to survey the rear boundary of lots 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, concession No. 2, in the Township of Assiginack, being the road allowance in rear of the lots fronting on the road to Michael's Bay, and have the same defined by permanent monuments, also in front of lots 20, 21 and 22 on the 6th and 7th concession road allowance. Also on the petition of the Council of the Township of Hinchinbrooke, to survey the line between concessions 7 and 8 from lots 9 to 13, in the Township of Hinchinbrooke.

The following municipal surveys have been confirmed under the provisions of the Revised Statutes of Ontario 1897, chapter 181, sections 14 and 15, such surveys being final and conclusive: Part of the concession line between concessions 3 and 4, in the township of East Oxford, in the County of Oxford, across lots 16 to 18 inclusive, and to define the road allowance between said concessions with stone or iron monuments. Also the concession line between concessions 6 and 7 in the Township of Elmsley North in the County of Lanark, from lots 22 to 30 inclusive, and to define the same by stone or iron monuments.

Particulars relating to these surveys will be found in Appendices 14 and 15, pages 44 and 45.

#### MINING AND OTHER SURVEYS.

The Mining Act of Ontario requires that applicants to purchase or lease mining lands in unsurveyed territory shall file in the Department surveyor's plans (in triplicate) of the proposed mining claims with field notes and description by metes and bounds, before any sale or lease can be carried out, and under Orders-in-Council, dated February 26th, 1906, 2nd October, 1907, 7th November, 1907, applicants to purchase islands, or locations for pleasure and summer resorts or for agricultural purposes in unsurveyed territory, are required to file surveyor's plans (in triplicate) of their islands or locations as the case may be, with field notes and descriptions by metes and bounds, together with the necessary affidavits as to there being no adverse claim by occupation or improvement, etc.



Under the above Act, Orders-in-Council and Regulations in the Districts of Parry Sound, Nipissing, Sudbury, Algoma, Thunder Bay, Rainy River and Kenora, an area of 18,428.27 acres has been sold and patented during the year, for which the sum of \$66,121.50 has been received, and an area of 15,262.99 acres has been leased for the sum of \$15,878.79 as the first year's rental.

W. H. HEARST,  
Minister.

Department of Lands, Forests and Mines.  
Toronto, October 31st, 1912.



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# APPENDICES

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## Appendix No. 1.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1912.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
	Hon. W. H. Hearst	Minister	1911, Oct. 12	\$ 6,000 00	
	Aubrey White	Deputy Minister	1882, Jan. 1	4,100 00	
	Geo. Kennedy	Law Clerk	1872, Feb. 1	2,700 00	Resigned, Dec. 30, 1911.
	Geo. W. Yates	Minister's Secretary	1899, Feb. 26	2,000 00	
	C. C. Hele	do	1912, Jan. 23	1,600 00	
	E. S. Williamson	Secretary to Department	1889, May 1	1,850 00	
	Janet Garvie	Stenographer	1905, Jan. 1	750 00	
	James Farrington	Clerk and Stenographer	1910, Dec. 14	600 00	
	J. J. Murphy	Chief Clerk	1872, May 1	2,200 00	
	Walter C. Cain	Clerk	1903, March 6	1,600 00	
	W. R. Ledger	do	1894, Feb. 5	1,250 00	
	Selby Draper	do	1903, Jan. 1	1,250 00	
	S. A. Platt	do	1907, March 13	1,050 00	
	F. Lucas	do	1909, March 24	1,000 00	
	F. Samuels	do	1909, March 24	775 00	
	W. B. Baines	do	1912, Oct. 5	800 00	
	May Bengough	Stenographer	1896, Oct. 23	700 00	
	Jean C. Oram	do	1907, Jan. 16	700 00	
	Nan McQueen	do	1908, March 24	675 00	
	R. H. Browne	Chief Clerk	1900, March 2	1,850 00	Died, Sept. 2, 1912.
	H. E. Johnston	Clerk	1907, March 13	1,100 00	
	E. F. O'Neil	Stenographer	1904, Nov. 9	700 00	
	G. B. Kirkpatrick	Director of Surveys	1886, Jan. 30	2,650 00	
	J. F. Whitson	Surveyor and Draughtsman	1892, Sept. 1	2,500 00	Transferred to Northern Development Branch June 1, 1912.
	L. V. Rorke	Asst. do	1909, May 1	2,100 00	
	W. F. Lewis	Clerk	1872, May 5	1,300 00	
	D. G. Boyd	Draughtsman	1897, Sept. 27	1,500 00	
	E. M. Jarvis	Clerk	1904, Oct. 19	1,200 00	
	J. B. Proctor	do	1897, Jan. 15	1,100 00	
	H. Treeby	Draughtsman	1904, Jan. 13	1,150 00	
Sales and Free Grants .....					
Military Grants.					
Surveys .....					

John Work .....	Draughtsman	1911, March 3 ..	1,050 00
	do	1907, March 13 ..	1,000 00
	do	1909, March 24 ..	1,000 00
	do	1909, March 24 ..	1,000 00
	do	1912, Oct. 5 .....	950 00
	Stenographer	1904, Nov. 23 .....	700 00
	do	1909, March 24 ..	650 00
	do	1911, March 3 ..	575 00
	do	1911, March 3 ..	575 00
	do	1911, March 3 ..	575 00
Patents .....	Chief Clerk	1890, May 22 ..	1,950 00
	Clerk	1900, April 9 ..	1,300 00
	do	1902, Jan. 13 ..	1,250 00
	do	1904, Jan. 15 ..	1,150 00
	do	1894, May 8 .....	950 00
	do	1909, March 24 ..	1,050 00
	Chief Clerk	1867, Dec. 1 .....	2,200 00
	Clerk	1898, Aug. 1 .....	1,600 00
	do	1900, April 9 ..	1,400 00
	do	1903, March 6 ..	1,200 00
Woods and Forests ..	do	1904, Jan. 13 ..	1,150 00
	do	1904, Nov. 23 ..	1,100 00
	do	1907, March 13 ..	1,200 00
	do	1909, March 24 ..	900 00
	do	1909, March 24 ..	900 00
	do	1911, Nov. 1 .....	850 00
	do	1910, June 1 .....	800 00
	do	1907, March 13 ..	700 00
	Stenographer	1909, March 24 ..	700 00
	do	1909, Sept. 1 .....	600 00
Accounts .....	Accountant	1861, April 15 ..	2,400 00
	Clerk	1904, Jan. 13 .....	1,400 00
	do	1907, March 13 ..	1,050 00
	do	1907, March 13 ..	1,050 00
	Clerk and Stenographer	1911, March 3 ..	625 00
	Registrar	1880, March 1 ..	1,550 00
	Clerk	1907, March 13 ..	1,100 00
	Deputy Minister	1891, June 19 .....	3,600 00
	Secretary	1907, March 13 ..	1,200 00
	do	do	do
Bureau of Mines.	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do
	do	do	do

Died, Sept. 18, 1912.

Resigned, June 30, 1912.

Resigned June 4, 1912.

## Appendix No. 1.—Concluded.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1912

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
Bureau of Mines.	W. H. Morris	Clerk	1906, Jan. 1	\$ 1,050 00	
	R. A. Sinclair	do	1907, March 13	1,000 00	
	W. Lemoine	do	1908, April 8	1,050 00	
	A. Burritt	do	1908, April 8	1,050 00	
	D. H. Barr	do	1907, March 13	1,050 00	
	Anne Moffatt	do	1901, March 1	1,000 00	
	A. G. Scovell	do	1909, March 24	950 00	
	C. W. St. John	do	1910, April 14	900 00	
	Ethel Craig	Stenographer	1906, May 16	725 00	
	Flossie McDougall	do	1907, March 13	700 00	
	J. L. McNaughton	do	1909, March 24	700 00	
	H. W. Batchelor	do	1911, Dec. 19	550 00	
	H. Brophy	Messenger	1898, Oct. 1	850 00	
					Died, Dec. 6, 1911.

D. GEO. ROSS,  
Accountant.AUBREY WHITE,  
Deputy Minister Lands and Forests.



## Appendix No. 2.

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1912.

Name.	Post office address.	District or county.	Date of appointment.	Salary per annum.	Remarks.
Baker, R. H. ....	Minden .....	Part of Victoria .....	1907, Oct. 1 ..	\$ 350 00	
Barr, James .....	Port Frances .....	Homestead Inspector .....	1906, Nov. 23 ..	1,200 00	
Both, Charles .....	Denbigh .....	Part of Frontenac and Addington .....	1905, Oct. 20 ..	100 00	
Brown, J. B. ....	Bracebridge .....	Homestead Inspector and Crown Land Agent .....	1905, July 28 ..	900 00	
Byers, R. J. ....	Massey .....	Part of District of Sudbury .....	1905, July 3 ..	500 00	
Buchanan, T. ....	Thessalon .....	do do Algoma .....	1901, Nov. 30 ..	300 00	
Burrows, W. A. ....	Port Arthur .....	do do Thunder Bay .....	1912, Jan. 30 ..	500 00	
Burnes, C. W. ....	Sundridge .....	Homestead Inspector .....	1905, Nov. 15 ..	900 00	
Cameron, Wm. ....	Stratford Sta. ....	Part of District of Rainy River .....	1911, Apr. 27 ..	500 00	
Chester, F. A. ....	New Liskeard .....	Homestead Inspector .....	1906, June 8 ..	1,200 00	
Child, T. ....	Matheson .....	Part of District of Nipissing .....	1909, Jan. 8 ..	500 00	Resigned, March 12, 1912.
Dean, Thomas .....	Sault Ste. Marie. ....	Homestead Inspector .....	1908, July 29 ..	600 00	
Dempsey, W. J. ....	Cochrane .....	Part of District of Nipissing .....	1911, Feb. 1 ..	500 00	
Ellis, H. J. ....	Greenview .....	do Hastings .....	1912, June 1 ..	500 00	
Freeborn, Dr. J. S. ....	Powassan .....	do do Parry Sound .....	1909, May 20 ..	500 00	
Ginn, F. E. ....	Magnetawan .....	do do do .....	1905, Nov. 10 ..	500 00	
Grills, J. J. ....	New Liskeard .....	do do Nipissing .....	1912, Mar. 20 ..	500 00	
Groulx, R. J. ....	Chelmsford .....	Lake Temiskaming, District of Nipissing ..	1905, July 3 ..	500 00	
Hales, W. ....	Apsey .....	Homestead Inspector .....	1906, May 7 ..	600 00	
Hollands, C. J. ....	Port Frances .....	Part County of Peterboro .....	1911, July 17 ..	250 00	
Hughes, Thomas .....	Murillo .....	Part Township of Alberta and part of District of Rainy River .....	1892, Oct. 12 ..	300 00	
Jenkins, Wm. ....	Emisdale .....	Homestead Inspector .....	1908, July 20 ..	800 00	
Langlois, E. ....	Warren .....	Part of District of Parry Sound .....	1908, July 29 ..	500 00	
Lemieux, J. A. ....	Bleazard Valley .....	do do Sudbury .....	1911, Apr. 4 ..	500 00	
MacLennan, J. K. ....	Sudbury .....	do do do .....	1908, July 1 ..	400 00	
McFadyen, Alex. ....	Emo .....	do do do .....	1905, July 3 ..	500 00	
Mulvaney, N. ....	Espanola Sta. ....	do do Rainy River .....	1905, Sept. 8 ..	500 00	
Parsons, W. J. ....	North Bay .....	do do Algoma .....	1912, June 1 ..	100 00	
Phillon, J. A. ....	Sturgeon Falls ..	do do Nipissing .....	1908, April 8 ..	500 00	
		do do do .....	1907, Sept. 13 ..	500 00	

*Appendix No. 2.—Concluded.*

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1911.—*Continued.*

Name.	Post office address.	District or county.	Date of appointment.	Salary per annum.	Remarks.
Powell, F. R. ....	Parry Sound ....	Part of District of Parry Sound .....	1907, May 31.	\$ 500 00	
Prince, Adam ....	Wilno .....	do Renfrew .....	1905, July 12.	500 00	
Pronger, R. H. ....	Dryden .....	District of Rainy River .....	1906, May 7 .	500 00	
Quenneville, I. ....	Sturgeon Falls ..	Homestead Inspector .....	1906, May 7 .	600 00	
Rothwell, B. J. ....	Sault Ste. Marie.	Part District of Algoma .....	1909, March 1	300 00	
Smith, Dalton ....	Cochrane .....	Homestead Inspector .....	1912, April 16	800 00	
Small, Robert ....	Mattawa .....	Part District of Nipissing .....	1910, June 30.	500 00	
Spry, W. L. ....	Kenora .....	do do Rainy River .....	1909, Sept. 21.	400 00	Also Mining Recorder.
Tait, J. R. ....	L'Amable .....	do Hastings .....	1869, May 28 .	500 00	Died, May 13, 1912.
Wilson, James ....	Kinmount .....	do Peterboro .....	1905, May 31 .	150 00	
Warren, D. B. ....	Pembroke .....	do Renfrew .....	1905, July 3 .	300 00	
Watson, T. P. ....	New Liskeard ...	Homestead Inspector .....	1905, May 10 .	915 00	
Whybourne, W. E. .	Marksville .....	Part of St. Joseph Island .....	1905, April 7 .	250 00	
Woollings, J. ....	Englehart .....	do District of Nipissing .....	1908, June 30.	500 00	

D. GEO. ROSS  
Accountant.

AUBREY WHITE,  
Deputy Minister Lands and Forests.

*Appendix No. 3.*

Statement of Lands Sold and Leased. Amount of Sales and Leases and Amount of Collections for the year ending October 31st, 1912.

Service.	Acres sold and leased.	Amount of sales and leases.	Collection on sales and leases.
<i>Lands Sold:</i>		\$ c.	\$ c.
Agricultural and Townsites.....	349,319.28	272,233 08	218,710 29
Mining .....	18,971.96	45,552 18	51,634 48
Clergy.....	101	110 00	1,565 92
Common School.....	2.50	94 00	7,121 25
Grammar School .....			292 55
University .....	11,890.50	6,855 80	4,263 39
<i>Lands Leased:</i>			
Mining .....	16,711.85	17,316 65	33,098 34
Crown .....	15,793.50	2,157 50	18,931 82
	412,790.59	\$344,319 21	\$335,645 04

D. GEO. ROSS.  
Accountant.

AUBREY WHITE.  
Deputy Minister Lands and Forests.



*Appendix No. 4.*

Statement of Revenue of the Department of Lands, Forests and Mines for the year ending October 31st, 1912.

Service.	\$	c.	\$	c.	\$	c.
<b>LAND COLLECTIONS.</b>						
<i>Crown Lands:</i>						
Agricultural .....	181,894	64				
Townsites .....	36,842	65				
			218,737	29		
Mining .....			51,634	48		
			270,371	77		
Clergy Lands .....	1,565	92				
Common School Lands .....	7,121	25				
Grammar School Lands .....	292	55				
University Lands .....	4,263	39				
			13,243	11		
<i>Rent:</i>						
Mining Leases .....	33,098	34				
Crown Leases .....	18,931	82				
			52,030	16		
Miners' Licenses .....	56,147	75				
Permits .....	1,780	75				
Recording Fees .....	49,234	20				
			107,162	70		
Royalties .....			250,145	65		
<i>Supplementary Revenue:</i>						
Acreage Tax .....	15,770	62				
Profit Tax .....	155,506	86				
Gas Tax .....	19,598	05				
			190,875	53		
					883,828	92
<b>WOODS AND FORESTS.</b>						
Bonus .....			540,702	85		
Timber Dues .....			1,339,957	12		
Ground Rent .....			96,262	81		
Transfer Fees .....			8,740	00		
					1,985,662	78
Provincial Assay Fees .....	654	00				
Casual Fees .....	655	47				
Cullers' Fees .....	124	00				
			1,433	47		
Algonquin Park .....	7,610	05				
Rondeau Park .....	489	65				
Forest Reserves .....	778	80				
			8,878	50		
					10,311	97
<b>REFUNDS.</b>						
Wood Ranging .....			5,751	67		
Fire Ranging .....			13,821	88		
Surveys .....			74	77		
Contingencies .....			60	00		
Diamond Drill .....			208	25		
Agents' Salaries .....			468	50		
Mining Recorders .....			16	00		
					20,401	07
					\$ 2,900,204	74

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

Appendix No. 5.

Statement of Receipts of the Department of Lands, Forests and Mines for the year ending October 31st, 1912, which are considered as Special Funds.

Service.	\$ c.	\$ c.
<i>Clergy Lands.</i>		
Principal. ....	956 59	
Interest.....	609 33	1,565 92
<i>Common School Lands.</i>		
Principal.....	2,303 28	
Interest.....	4,817 97	7,121 25
<i>Grammar School Lands.</i>		
Principal.....	110 80	
Interest.....	181 75	292 55
<i>University Lands.</i>		
Principal. ....	4,144 07	
Interest.....	119 32	4,263 39
		\$13,243 11

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 6.*

Statement of Disbursements of the Department of Lands, Forests and Mines for the year ending October 31st, 1912.

Service.	\$ c.	\$ c.	\$ c.
<b>AGENTS' SALARIES AND DISBURSEMENTS.</b>			
<i>Land, \$15,374.84.</i>			
Baker, R. H. ....	350 00		
Disbursements .....	8 30		
		358 30	
Both, C. ....		100 00	
Brown, James B. ....	900 00		
Disbursements .....	135 96		
		1,035 96	
Buchanan, Thomas ....	300 00		
Disbursements .....	4 52		
		304 52	
Burrows, W. A. ....	369 50		
Disbursements .....	18 45		
		387 95	
Byers, R. J. ....	500 00		
Disbursements .....	5 25		
		505 25	
Child, F. A. ....	190 75		
Disbursements .....	50 45		
		241 20	
Cameron, Wm. ....	500 00		
Disbursements .....	39 75		
		539 75	
Dempsay, S. J. ....	500 00		
Disbursements .....	54 35		
		554 35	
Douglas, W. J. ....		175 70	
Ellis, H. J. ....		500 00	
Freeborn, J. S. ....	500 00		
Disbursements .....	14 50		
		514 50	
Ginn, F. E. ....	309 25		
Disbursements .....	64 05		
		373 30	
Grills, J. J. ....	500 00		
Disbursements .....	78 95		
		578 95	
Hollands, C. J. ....		300 00	
Hales, W. ....		250 00	
Jenkin, Wm. ....	500 00		
Disbursements .....	7 87		
		507 87	
Langlois, E. ....	500 00		
Disbursements .....	4 06		
		504 06	
Lemieux, J. A. ....		400 00	
Mulvaney, N. ....	41 66		
Disbursements .....	38		
		42 04	
McFayden, A. ....	500 00		
Disbursements .....	81 91		
		581 91	
MacLennan, J. K. ....	500 00		
Disbursements .....	69 85		
		569 85	
<i>Carried forward</i> .....		9,325 46	



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		9,325 46	
<i>AGENTS' SALARIES AND DISBURSEMENTS—Continued.</i>			
<i>Land.—Concluded.</i>			
Oliver, J. A. (Acting) .....		130 50	
Parsons, W. J. ....	500 00		
Disbursements .....	17 00		
		517 00	
Phillion, J. A. ....	500 00		
Disbursements .....	20 18		
		520 18	
Powell, F. R. ....	500 00		
Disbursements .....	16 00		
		516 00	
Prince, A. ....	500 00		
Disbursements .....	17 00		
		517 00	
Pronger, R. H. ....	464 80		
Disbursements .....	41 43		
		506 23	
Rothwell, B. J. ....	300 00		
Disbursements .....	9 00		
		309 00	
Small, R. ....	500 00		
Disbursements .....	5 56		
		505 56	
Spry, W. L. ....	400 00		
Disbursements .....	523 75		
		923 75	
Tait, J. R. ....		324 30	
Warren, D. B. ....	300 00		
Disbursements .....	14 25		
		314 25	
Whybourne, W. E. ....	250 00		
Disbursements .....	3 41		
		253 41	
Wilson, J. ....	150 00		
Disbursements .....	16 20		
		166 20	
Woollings, Jos. ....	500 00		
Disbursements .....	46 00		
		546 00	
<i>Homestead Inspectors, \$10,524.41</i>			
Barr, James .....	1,200 00		
Disbursements .....	639 15		
		1,839 15	
Burnes, C. W. ....	900 00		
Disbursements .....	706 20		
		1,606 20	
Chester, T. ....	1,200 00		
Disbursements .....	279 80		
		1,479 80	
Dean, T. ....	600 00		
Disbursements .....	51 05		
		651 05	
Groulx, R. J. ....	600 00		
Disbursements .....	733 80		
		1,333 80	
<i>Carried forward</i> .....		22,284 84	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		22,284 84	
<b>AGENTS' SALARIES AND DISBURSEMENTS—Continued.</b>			
<i>Homestead Inspectors.—Concluded.</i>			
Hughes, Thos. ....	650 00		
Disbursements .....	320 65	970 65	
Quenneville, I. ....	600 00		
Disbursements .....	49 80	649 80	
Smith, Dalton .....	415 35		
Disbursements .....	115 35	530 70	
Watson, T. P. ....	915 00		
Disbursements .....	548 26	1,463 26	
<i>Timber, \$27,630.94.</i>			
Christie, W. P. ....	1,600 00		
Disbursements .....	383 59	1,983 59	
Hawkins, S. J. ....	1,400 00		
Disbursements .....	354 06	1,754 06	
Henderson, C. ....	1,800 00		
Webster, W. A. ....	800 00		
Disbursements .....	446 10	3,046 10	
Johnson, S. M. ....	1,600 00		
Disbursements .....	176 28	1,776 28	
McDonald, H. ....	1,400 00		
Disbursements .....	391 75	1,791 75	
McDougall, J. T. ....	1,600 00		
Disbursements .....	304 10	1,904 10	
MacDonald, S. C. ....	1,600 00		
Disbursements .....	179 05	1,779 05	
Margach, Wm. ....	1,600 00		
Legris, John .....	1,241 66		
Disbursements .....	2,129 97	4,971 63	
Maughan, Jos. ....	1,400 00		
Disbursements .....	529 68	1,929 68	
Oliver, J. A. ....	1,500 00		
Penfold, G. S. ....	733 36		
Disbursements .....	852 51	3,085 87	
Stevenson, A. ....	1,400 00		
Disbursements .....	437 20	1,837 20	
Watts, G. ....	1,500 00		
Disbursements .....	271 63	1,771 63	
<i>Carried forward</i> .....		53,530 19	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		53,530 19	
AGENTS' SALARIES AND DISBURSEMENTS— <i>Concluded.</i>			
<i>Miscellaneous, \$1,455.66.</i>			
Ames, D. H., Caretaker Islands in Dog and Lough- borough Lakes .....		20 00	
Bilton, Geo., Caretaker Islands in North and South Crosby .....		25 00	
Coveney, E., Valuating Lots in Sandwich East ..		25 00	
Davis, S., Caretaker Islands in Leonard Lake ...		20 00	
Guthrie, Wm., Caretaker Islands in Devil's Lake ..		25 00	
Giroux, F. A., Inspecting Township of Lorrain...		71 00	
McArthur, T. A., Inspector of Agencies .....	250 00		
Disbursements .....	464 40		
		714 40	
McKelvey, Wm., Inspection of Lots in Hardy and McConkey .....		440 26	
Scott, John, Inspecting Township of McConkey..		115 00	
			54,985 85
OTTAWA AGENCY.			
Darby, E. J., Agent .....		1,500 00	
Larose, S. C., Clerk .....		1,000 00	
Rent .....	500 00		
Disbursements .....	95 41		
		595 41	
WOOD RANGING.			3,095 41
Allen, R. A. ....	1,080 00		
Disbursements .....	100 45		
		1,180 45	
Almon, J. E. ....		332 00	
Ainslie, D. ....		675 00	
Ansley, W. E. ....		750 00	
Ansley, J. J. ....		317 50	
Arnell, Wm. ....		695 00	
Bailey, S. I. ....		905 00	
Barrett, Thos. ....	780 00		
Disbursements .....	43 00		
		823 00	
Barins, P. ....		60 00	
Bates, R. ....		136 00	
Baulk, G. R. ....		380 00	
Bedome, W. E. ....		312 00	
Benham, W. E. ....		120 00	
Berlinquet, J. ....		188 00	
Binnie, T. ....		805 00	
Bliss, L. E. ....	915 00		
Disbursements .....	853 91		
		1,768 91	
Boussineau, Peter .....		141 00	
Bremner, Geo. ....		400 00	
Brown, J. T. ....		1,008 00	
Buckan, S. ....		324 00	
Buchan, H. ....		539 42	
Buie, D. ....		938 27	
Buisson, Wm. ....		765 00	
Burns, Gordon G. ....		228 00	
Burns, W. S. ....		205 50	
<i>Carried forward</i> .....		13,997 05	58,081 26



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		13,997 05	58,081 26
<i>WOOD RANGING.—Continued.</i>			
Callahan, T. ....		500 00	
Canose, J. ....		162 00	
Carnfoil, D. ....		175 50	
Carter, Geo. ....		565 00	
Castonguay, A. C. ....		835 00	
Charlton, W. R. ....		81 00	
Chenier, D. A. ....		655 00	
Clarke, D. ....		564 00	
Comer, B. F. ....		484 00	
Corrigan, R. T. ....		1,210 00	
Coyne, Phin. ....		885 00	
Crawford, S. N. ....		317 50	
Cross, R. J. ....		536 00	
Currie, J. ....		147 00	
Didier, H. ....		770 00	
Dougherty, R. ....		50 00	
Dougherty, J. M. ....		92 00	
Douglas, J. ....		9 00	
Durrell, Wm. ....		1,240 00	
Duval, C. A. ....		605 00	
Ferguson, E. A. ....		815 00	
Fiddes, J. ....		444 00	
Fisher, Geo. ....		765 00	
Fraser, D. ....		895 00	
Fraser, W. A. ....		360 00	
Fraser, T. ....		117 00	
Gamey, W. H. ....		620 00	
Gault, R. ....		24 00	
Gilligan, E. ....		6 00	
Gorman, J. P. ....		552 50	
Hagan, E. G. ....		550 00	
Hargis, Thos. ....		416 00	
Hartley, Chas. ....		1,175 00	
Hawkins, H. C. ....		575 00	
Henderson, Chas. ....		107 15	
Henry, Mat. ....		3 00	
Hey, B. ....		220 00	
Huckson, A. H. ....		1,275 00	
Hutton, John ....		1,270 00	
Irving, Ed. ....		560 00	
Johnston, T. ....		158 00	
Kelso, Robt. ....		3 00	
Kernahan, G. A. ....		192 00	
Kerby, D. F. ....		675 00	
Lee, J. B. ....		740 00	
LeRoy, J. H. ....		804 00	
Lockhart, Jas. ....		6 00	
Londry, W. E. ....		539 42	
Long, H. E. ....	780 00		
Disbursements .....	212 15		
		992 15	
Lowe, W. E. ....		484 00	
MacDonell, R. D. ....		588 00	
MacNamara, J. ....		795 00	
Margach, Wm., Disbursements .....		338 93	
Margach, J. A. ....	680 00		
Disbursements .....	19 10		
		699 10	
<i>Carried forward</i> .....		41,644 30	58,081 26

## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Carried forward</i> .....		41,644 30	58,081 26
<i>WOOD RANGING.—Continued.</i>			
Manice, Wm. ....		1,185 00	
Maughan, J., Disbursements .....		149 44	
Menzies, Alex. ....		880 00	
Milway, J. H. ....		995 00	
Molyneaux, G. ....		860 00	
Mooney, L. ....		310 00	
Morel, H. ....		395 00	
Morley, C. ....		560 00	
Muckle, J. ....		132 00	
Murray, Wm. ....		1,420 00	
McAuley, W. D. ....		611 34	
McCaw, J. G. ....	1,565 00		
Disbursements .....	62 32		
		1,627 32	
McCaw, J. E. ....		595 00	
McDonald, A. J. ....	1,252 00		
Disbursements .....	70 20		
		1,322 20	
McDonald, J. ....		306 00	
McDonald, J. D. ....		1,345 00	
McDonald, Thos. ....		541 85	
McDonald, A. ....		504 00	
McGillivray, D. D. ....		560 00	
McGregor, C. F. ....		505 00	
McIvor, J. A. ....		480 00	
McLaughlin, J. ....		200 25	
McLeod, W. A. ....		820 00	
McKenzie, R. ....		632 00	
McKinley, J. H. ....		580 00	
McNabb, Alex. ....		850 00	
McPherson, J. S. ....		1,540 00	
Nault, Jas. ....		56 00	
Nevison, R. H. ....		284 00	
Newburn, Wm. ....		660 00	
Niblett, J. ....		245 00	
O'Donald, C. ....		55 00	
Oliver, J. A., Disbursements .....		34 00	
O'Malley, D. ....		37 50	
Paul, C. A. ....		938 27	
Patterson, Malcolm ....		141 00	
Pigott, J. ....		1,060 00	
Presley, J. ....		50 00	
Prevost, D. ....		110 25	
Pronger, H. ....		141 00	
Purdy, John ....		655 00	
Revell, L. O. ....		1,544 00	
Ridley, R. ....		1,040 00	
Ritchie, J. A. ....		640 77	
Robertson, J. A. ....		460 00	
Rogers, Fred. ....		219 04	
Ross, S. ....		880 00	
Rowe, F. E. ....		452 00	
Rushworth, Chas. ....		60 00	
Rusk, O. ....	780 00		
Disbursements .....	3 50		
		783 50	
Sanderson, Geo. ....		345 00	
Sharp, Jos. ....		9 00	
<i>Carried forward</i> .....		72,451 03	58,081 26
3 L.M.			

## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		72,451 03	58,081 26
<i>WOOD RANGING—Concluded.</i>			
Sharpe, J. A. ....		1,560 00	
Shaw, Geo. ....		80 00	
Shaw, D. ....		648 00	
Shaw, Alf. ....		510 00	
Shields, F. ....		616 00	
Shilling, H. ....		165 00	
Short, J. ....		360 00	
Simmons, A. G. ....		608 00	
Simpson, Wm. ....		770 00	
Smith, J. D. C. ....		528 00	
Smith, V. ....		48 00	
Smith, D. ....		12 00	
Stein, P. ....		621 15	
Stewart, R. E. ....		508 00	
Stewart, J. ....		384 00	
Thomson, W. B. ....	520 00		
Disbursements .....	14 50		
		534 50	
Thompson, G. S. ....		880 00	
Thorp, Thos. ....		290 00	
Tucker, L. A. ....		460 00	
Turpin, T. ....		27 50	
Urquhart, A. ....		855 00	
Vanier, John ....		295 00	
Vincent, H. T. ....		1,125 00	
Wagner, F. ....		376 00	
Watts, Geo., Disbursements .....		12 45	
Watts, W. B. ....		432 00	
Watts, J. J. ....		132 00	
Webster, W. A. ....		775 00	
Whalen, P. J. ....		1,435 00	
White, A. P. ....		645 00	
Wilkins, G. N. ....		870 00	
Wilson, Dan ....		715 00	
Wood, W. D. ....		609 43	
Yuill, T. ....		825 00	
Yuill, J. A. ....		65 00	
Yuill, A. D. ....		185 00	
Young, R. J. ....		340 00	
			91,753 06
<i>EXPLORATION AND ESTIMATION OF TIMBER BERTHS</i>			
Annis, Victor ....		8 00	
Chenier, D. A. ....		84 00	
Dulmage, James ....		7 50	
Durrell, Wm. ....		75 00	
Henderson, Chas., Disbursements .....		517 32	
Margach, J. A. ....		19 00	
McDonald, J. D. ....		50 00	
McLaughlin, J. ....		20 25	
Mooney, L. ....		98 00	
Presley, J. ....		22 50	
Smith, Walter, Disbursements .....		98 11	
Webster, W. A. Disbursements .....		62 50	
			1,062 18
<i>Carried forward</i> .....			150,896 50



## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			150,896 50
FIRE RANGING.			
Adams, A. ....		382 50	
Allen, D. ....		385 00	
Allen, T. W. ....		377 50	
Anger, L. ....		296 00	
Annis, Jas. ....		160 00	
Armstrong, T. C. ....		317 50	
Armstrong, G. D. ....		360 00	
Armstrong, W. H. ....		382 50	
Ault, J. C. ....		357 50	
Austin, P. ....		270 00	
Aylward, J. ....		620 00	
Bailey, H. ....		207 50	
Bain, L. ....		382 50	
Baker, H. S. ....		382 50	
Baker, O. ....		265 00	
Baker, D. M. ....		380 00	
Barbeau, J. ....		296 00	
Bartlett, G. W., Disbursements .....		142 69	
Bellanger, E. ....		296 00	
Bennington, J. D. ....		294 00	
Bentham, W. G. ....		382 50	
Berry, Geo. ....		352 50	
Berry, Geo. B. ....		296 00	
Bertram, J. ....		332 50	
Bertrand, H. ....		385 00	
Binnie, T. ....		368 50	
Bisaillon, C. H. ....		85 00	
Bisaillon, J. H. ....	895 00		
Disbursements .....	594 89		
		1,489 89	
Bisaillon, James .....		307 50	
Bisio, C. H. ....		170 00	
Bissonette, R. J. ....		282 50	
Blair, Bert .....		318 00	
Blaise, O. ....		300 00	
Bliss, L. E., Disbursements .....		492 13	
Bliss, C. H. ....		322 50	
Boccard, Adolph .....		305 00	
Bonin, A. ....		382 50	
Bonter, S. ....		387 50	
Bookhout, H. ....		405 00	
Bottrell, D. ....		352 50	
Boulanger, P. ....		207 50	
Brasher, S. M. ....		382 50	
Brown, T. E. ....		365 00	
Brown, A. ....		282 00	
Brown, P. R. ....		295 00	
Brown, Thos. ....		232 50	
Brooks, A. ....		500 00	
Brozeau, A. ....		382 50	
Brozeau, O. ....		382 50	
Brunet, A. ....		382 50	
Bruce, Geo. ....		327 50	
Buchanan, R. F. ....		382 50	
Burnham, H. H. ....		332 50	
Burger, Wm. ....		372 50	
Burns, Robt. ....		252 00	
<i>Carried forward</i> .....		19,350 71	150,896 50

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		19,350 71	150,896 50
<i>FIRE RANGING.—Continued.</i>			
Burns, W. S. ....		632 00	
Burrows, C. S. ....		190 00	
Callahan, A. S. ....		260 00	
Callahan, T. ....		327 50	
Cameron, W. J. ....		370 00	
Campbell, Duncan ....		420 00	
Campbell, R. ....		282 00	
Caronchan, G. ....		387 50	
Capp, S. ....		382 50	
Cavanagh, S. ....		220 00	
Ceaser, H. P. ....		387 50	
Chambers, Thomas ....		380 00	
Chapman, Wm. ....		282 00	
Christie, W. I. ....	423 00		
Disbursements .....	105 75		
		528 75	
Christie, W. P., Disbursements .....		138 09	
Chittick, W. J. ....		407 50	
Clark, Harry ....		382 50	
Cobb, C. E. ....		288 00	
Coghlan, J. S. ....		312 50	
Combs, F. H. ....		335 00	
Contryman, J. G. ....		282 00	
Coombs, J. ....		284 00	
Cooper, A. W. ....		268 00	
Copley, J. D. ....		202 00	
Cousineau, C. ....		382 50	
Cousineau, A. ....		390 00	
Cox, J. H. ....		282 00	
Coyne, P. ....	765 00		
Disbursements .....	273 98		
		1,038 98	
Craigie, H. ....		382 50	
Cridford, W. G. ....		282 00	
Cullane, D. ....		262 00	
Darkhouse, J. ....		167 50	
Darlington, E. ....		247 50	
Davidson, L. ....		272 50	
Davison, Ira ....		387 50	
Davis, J. ....		100 00	
Dean, A. ....		407 50	
Deschamp, F. ....		382 50	
Dial, A. C. ....		299 50	
Didier, H. ....		387 00	
Dobbs, G. W. ....		296 00	
Donald, R. ....		167 50	
Dougherty, A. E. ....		387 50	
Dubbiday, John ....		290 00	
Duff, R. A. ....		430 00	
Duncan, R. ....		368 50	
Durfey, L. H. ....		335 50	
Drew C. ....		268 00	
Dyson, W. ....		390 00	
Eastwood, J. ....		15 00	
Eaton, Leslie ....		7 00	
Eilber, George ....		382 50	
Elliott, A. ....		337 50	
<i>Carried forward</i> .....		36,646 53	150,896 50

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		36,646 53	150,896 50
<i>FIRE RANGING.—Continued.</i>			
Elliott, G. ....		221 50	
Elliott, Jac. ....		365 00	
Ellis, E. C. ....		370 00	
English, M. ....		382 50	
English, John ....		280 00	
Fairbairn, N. H. ....		528 00	
Ferguson, George ....		380 00	
Ferguson, Thomas H. ....		370 00	
Fisher, George ....		524 00	
Fitzbock, John ....		210 00	
Fitzgerald, Robert ....		266 00	
Flannagan, James ....		298 00	
Forman, J. L. ....		194 00	
Forsyth, W. W. ....		10 00	
Francey, George ....		292 00	
Fraser, W. A. ....		387 50	
Gagne, F. ....	174 69		
Disbursements .....	895 00		
		1,069 69	
Gale, W. J. ....		387 50	
Galt, J. ....		310 75	
Gammond, George ....		310 00	
Gault, James ....		231 25	
Gauthier, Theo. ....		407 50	
Gemmell, John ....	564 00		
Disbursements .....	164 50		
		728 50	
Gillanders, G. ....		235 00	
Gladd, Albert ....		210 00	
Gliddon, G. C. ....		268 00	
Glover, Ed. ....		296 00	
Godin, Ed. ....		282 50	
Gordon, Wm. ....		324 50	
Gordon, T. S. ....		148 00	
Gorman, J. P. ....		484 00	
Gunn, M. G. ....		125 00	
Guthrie, Wm. ....		390 00	
Hackett, Wm. ....		385 00	
Hamilton, A. J. ....		196 00	
Hamilton, Robert ....		272 00	
Hammond, W. ....		372 50	
Hammond, Wm. ....		282 00	
Hand, Thomas ....		564 00	
Hankshaw, Wm. ....		140 00	
Hanks, F. ....		352 50	
Hanmer, George ....		375 00	
Harrison, W. H. ....		168 00	
Hatch, B. ....		99 00	
Hawkesbury Lumber Co. ....		256 00	
Hayes, J. L. ....		272 00	
Henderson, Charles ....		680 33	
Henderson, C. E. ....		267 00	
Henderson, G. ....		283 25	
Henderson, John ....		240 00	
Hennessy, Wm. ....		106 00	
Henrey, Alex. ....		282 50	
Higgins, Robert ....		308 00	
<i>Carried forward</i> .....		53,834 30	150,896 50



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		53,834 30	150,896 50
<b>FIRE RANGING.—Continued.</b>			
Hollis, J. ....		300 00	
Hornick, George .....		370 00	
Hough, J. A. ....		382 50	
Ireton, F. ....		60 00	
Irish, W. ....		235 00	
Isbister, J. A. ....		332 50	
James, F. ....		275 00	
Jamieson, K. ....		365 00	
Jarvis, Edgar .....		337 50	
Jenkin, S. ....	276 00		
Disbursements .....	92 00		
		368 00	
Johnson, G. N. ....		362 50	
Johnston, Wm. ....		168 00	
Jones, R. E. ....		254 00	
Kelly, Charles A. ....		385 00	
Kelly, M. ....		385 00	
Kerr, Alex. ....		306 00	
King, W. A. ....		8 00	
Lalond, E. ....		372 50	
Lalond, J. M. ....		62 50	
Langford, Thomas .....		248 00	
Langtree, John .....		365 00	
Laurin, J. A. ....		385 00	
LeBlanc, Oliva .....		382 50	
LeBlanc, Oliver .....		564 00	
Leclaire, S. ....		296 00	
Lee, J. B. ....	835 00		
Disbursements .....	235 60		
		1,070 60	
Lennox, T. A. ....		370 00	
Leo, Philip .....		188 00	
Leo, Charles .....		190 00	
Leppard, Fred. ....		202 00	
Levis, J. A. ....		370 00	
Liddle, H. W. ....		272 00	
Locheed, R. W. ....		387 50	
Lockhart, W. H. ....		380 00	
Long, H. E. ....	765 00		
Disbursements .....	193 63		
		958 63	
Loys, Robert .....		377 50	
Lutton, B. M. ....		332 50	
Lyons, R. ....		282 50	
MacDonald, Ed. ....		357 50	
MacDonald, S. C., Disbursements .....		8 90	
MacDonell, L. P. ....		387 50	
Macdonell, R. D. ....		564 00	
MacNeill, E. R. ....		382 50	
Margach, Wm., Disbursements .....		636 48	
Margach, J. A. ....		332 00	
Marshall, J. A. ....		290 00	
Marshall, James .....		100 00	
Marston, W. ....		382 50	
Martin, E. M. ....		300 00	
Mason, Alex. ....		370 00	
<i>Carried forward</i> .....		70,896 41	150,896 50

## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		70,896 41	150,896 50
<i>FIRE RANGING.—Continued.</i>			
May, H. ....	860 00		
Disbursements .....	210 29		
		1,070 29	
May, Alex. ....		172 50	
Menzies, A. ....		448 00	
Merchant, John .....		388 75	
Merchant, H. ....		397 50	
Miller, R. ....		357 50	
Mills, W. F. ....		84 00	
Milway, J. H. ....		412 00	
Minher, D. ....		296 00	
Molyneaux, G. ....		423 00	
Montgomery, R. ....		280 00	
Montgomery, T. P. ....		385 00	
Monohon, P. ....		370 50	
Merand, L. ....		387 50	
Morin, John .....		385 00	
Morris, D. ....		236 00	
Moore, James .....		260 00	
Moore, B. F. ....		385 00	
Moody, H. D. ....		335 00	
Mowell, John .....		65 00	
Murphy, Pat. ....		185 00	
Murphy, Pete ....		185 00	
McArthur, J. A. ....		380 00	
McColl, W. ....		370 00	
McCullough, D. J. ....		395 00	
McDonald, T. ....		264 00	
McDougall, J. T., Disbursements .....		17 30	
McIntosh, James .....		296 00	
McIver, H. ....		382 50	
McKenzie, A. ....		363 00	
McKenzie, R. ....		368 50	
McKinnon, H. ....		382 50	
McLaren, W. A. ....		382 50	
McLaren, Alex. ....		387 50	
McLaughlin, John .....		367 50	
McMeekin, S. ....		305 00	
McPhee, D. J. ....		370 00	
McMullin, S. J. ....		382 50	
McMurry, John .....		380 00	
McRae, D. A. ....		387 50	
Nadon, D. ....		367 50	
Neilly, L. M. ....		155 00	
Neelon, G. M. ....		387 50	
Newburn, Wm. ....		564 00	
Newell, John .....		300 00	
Newhouse, Alex. ....		302 50	
Niely, W. ....		383 75	
Ojick, J. ....		290 00	
Oldfield, A. ....		372 50	
Oliver, J. A., Disbursements .....		222 31	
O'Malley, D. ....		198 00	
Onegut, J. ....		237 50	
Ouellette, F. ....		385 00	
Patterson, H. L. ....		385 00	
Pigeon, C. ....		356 50	
<i>Carried forward</i> .....		89,493 31	150,896 50

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		89,493 31	150,896 50
<i>FIRE RANGING.—Continued.</i>			
Pingle, A. ....		387 50	
Powell, George .....		375 00	
Powell, N. L. ....		387 50	
Prevoust, D. ....		216 00	
Proulx, A. ....		387 50	
Quick, W. G. ....		365 00	
Quilty, J. ....		200 00	
Radcliffe, R. A. ....		327 50	
Ranger, A. ....		382 50	
Redden, M. A. ....		387 50	
Read, C. F. ....		350 00	
Reeves, E. H. ....		370 00	
Remus, Charles .....		266 00	
Rennon, James .....		187 50	
Reynolds, M. ....		287 50	
Richardson, S. ....		352 50	
Richardson, John .....		382 50	
Rodden, M. J. ....		387 50	
Robinson, Peter .....		285 00	
Rochford, A. ....		385 00	
Rogers, R. ....		32 50	
Ross, W. ....		370 00	
Rushworth, C. E. ....		287 50	
Rusk, O. ....	632 00		
Disbursements .....	542 25		
		1,174 25	
Russell, A. ....		300 00	
Saunders, H. A. ....		375 00	
Sauve, J. ....		387 50	
Savard, A. ....		382 50	
Schenk, Nelson .....		382 50	
Schneider, C. ....		297 50	
Scully, James .....		362 50	
Scott, Robert .....		572 00	
Seline, A. ....		2 25	
Seline, F. ....		2 25	
Seline, J. ....		2 25	
Sharpe, J. ....		382 50	
Shields, H. R. ....		370 00	
Shields, F. ....		282 50	
Shilling, H. ....		155 00	
Shore, D. ....		377 50	
Sherlock, S. ....		382 50	
Simpson, A. ....		349 25	
Skidmore, T. B. ....		370 00	
Small, M. A. ....		360 00	
Smith, H. S. ....		305 00	
Smith, V. ....		267 00	
Smyth, J. J. ....		367 50	
Snatch, Joseph .....		132 50	
Snider, S. H. ....		380 00	
Spearing, Fred. ....		256 00	
Spearman, T. ....		160 00	
Spence, E. J. ....		5 00	
Spence, D. ....		352 50	
Spillett, J. J. ....		365 00	
Spillett, A. J. ....		365 00	
<i>Carried forward</i> .....		107,078 06	150,896 50



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		107,078 06	150,896 50
<i>FIRE RANGING—Concluded.</i>			
Stewart, Charles .....		370 00	
Stevens, Alex. ....		187 50	
Storey, V. ....		342 50	
Storey, Wm. ....		5 00	
Stubbington, F. J. ....		296 00	
Sturdy, G. R. ....		300 00	
Sutherland, R. A. ....		380 00	
Sutton, G. ....		300 00	
Switzer, D. ....		82 50	
Thomas, Philip .....		377 50	
Thompson, G. S. ....	572 00		
Disbursements	238 95		
		810 95	
Thompson, J. H. ....		272 50	
Tooke, S. ....		387 50	
Toomer, S. ....		390 00	
Tower, O. ....		576 00	
Tremblay, Emelien .....		385 00	
Tremblay, E. ....		387 50	
Trollope, Henry .....		276 00	
Twigg, J. F. ....		380 00	
Tye, R. H. ....		345 00	
Urlin, W. R. ....		375 00	
Urquhart, A. ....		544 00	
Urquhart, J. ....		60 00	
Valentine, D. ....		85 00	
Volois, P. ....		385 00	
Walker, G. ....		387 50	
Wallace, W. F. ....		244 00	
Ward, W. D. ....		130 00	
Washburn, B. ....		352 50	
Watson, R. W. ....		290 00	
Watts, George, Disbursements .....		232 48	
Waugh, J. K. ....		385 00	
Webster, R. D. ....		345 00	
West, W. ....		312 50	
Whaley, G. ....		385 00	
Whalley, H. ....		385 00	
Whiteoak, D. ....		387 50	
Whitock, H. W. ....		385 00	
Wier, S. ....		385 00	
Wier, G. ....		268 00	
Wilkins, D. E. ....		375 00	
Wilkins, G. N. ....		560 00	
Williams, R. E. ....		380 00	
Wilson, James .....		272 50	
Wilson, J. G. ....		327 50	
Wilson, H. J. ....		377 50	
Winn, J. ....		292 50	
Wood, H. C. ....		25 00	
Wood, W. D. ....		472 00	
Wooden, John .....		370 00	
Woodcock, G. ....		432 50	
Wright, J. S. ....		346 25	
			124,483 74
<i>Carried forward</i> .....			275,380 24

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					275,380	24
FOREST RESERVES.						
<i>Temagami Reserve—\$46,394.96.</i>						
Albright, L. ....			367	50		
Albright, A. J. ....			367	50		
Barr, James .....			837	50		
Barrett, Thomas .....	765	00				
Disbursements .....	216	63				
			981	63		
Barraclough, W. W. ....			300	00		
Benoit, E. ....			352	50		
Bertrand, O. ....			305	00		
Biederman, Wm. ....			295	00		
Bibet, L. A. ....			277	50		
Bissett, J. ....			370	00		
Boivin, J. ....			365	00		
Bresebois, P. ....			357	50		
Brown, J. F. ....			137	50		
Buisson, W. ....			365	00		
Campbell, G. L. ....			267	50		
Clement, F. W. ....			360	00		
Clemow, F. ....			352	50		
Coghill, R. ....			367	50		
Cook, W. F. ....			275	00		
Corbett, G. E. ....			437	50		
Davidson, R. D. ....			352	50		
Deacon, A. ....			365	00		
D'Embremont, F. ....			365	00		
Derosiers, John .....			365	00		
Downs, George .....			367	50		
Duff, H. D. ....			367	50		
Duff, J. H. ....			357	50		
Duisetti, T. ....			135	00		
Dunston, G. ....			270	00		
Egan, Wm. ....			332	50		
Evans, J. J. ....			355	00		
Faeris, R. ....	1,061	00				
Disbursements .....		8	00			
			1,069	00		
Farmer, J. F. ....			365	00		
Flannagan, Ed. ....			355	00		
Forsyth, G. ....			352	50		
Fox, W. W. ....			367	50		
Fuller, E. W. ....			357	50		
Galligan, J. B. ....			305	00		
Gauthier, O. ....			352	50		
Graham, Jas. E. ....			230	00		
Grenier, Jas. ....			367	50		
Goodearle, W. E. ....			320	00		
Haines, Herb. ....			367	50		
Harrison, J. W. ....			435	00		
Hayden, G. F. ....			360	00		
Henderson, C., Disbursements .....			167	56		
Herlihy, D. ....			367	50		
Higgins, L. T. ....			367	50		
Higley, C. E. ....			295	00		
Hindson, C. E. ....	1,300	00				
Disbursements .....		760	62			
			2,060	62		
<i>Carried forward</i> .....			20,233	81	275,380	24

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		20,233 81	275,380 24
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Continued.</i>			
Hogan, M. A. ....		320 00	
Holland, B. J. ....		147 50	
Jocko, J. ....		277 50	
Johnston, Jas. ....		360 00	
Johnston, W. J. ....		292 50	
Keefer, N. S. ....		297 50	
Kelly, T. ....		320 00	
Kelso, R. F. ....		367 50	
Kennedy, Wm. ....		355 00	
Knox, J. E. ....		317 50	
Kruger, L. E. ....		62 50	
Lamarche, A. ....		915 00	
Landeront, J. P. ....		362 50	
Latoure, John ....		367 50	
Legree, V. ....		362 50	
Livingston, J. A. ....		317 50	
Lyon, J. W. ....		350 00	
Marks, V. ....		370 00	
Marshall, A. C. ....		365 00	
Mason, D. M. ....		367 50	
Maynard, W. B. ....		295 00	
Montgomery, A. ....		397 50	
Monville, M. ....		365 00	
Moore, C. A. ....		342 50	
Moran, O. ....		360 00	
Morel, H. ....		365 00	
McClennagan, A. R. ....		342 50	
McCost, H. ....		352 50	
McGregor, P. ....		102 50	
McGuire, H. ....		342 50	
McIntyre, D. S. ....		170 00	
McKay, Angus ....		237 50	
McLaughlin, John ....		12 50	
McLeod, J. D. ....		367 50	
McNeilly, Mat. ....		347 50	
McPhee, H. A. ....		347 50	
McPherson, J. B. ....		292 50	
Nadon, P. ....		365 00	
Neil, W. ....		365 00	
Nicholas, Herb. ....		367 50	
Nixon, John ....		365 00	
O'Neil, W. S. ....		360 00	
Papineau, Jos. ....		340 00	
Petrant, T. ....		15 00	
Petrant, Wm. ....		332 50	
Philpott, G. M. ....		367 50	
Pointer, R. R. ....		360 00	
Powell, John ....		315 00	
Prudhomme, W. A. ....		370 00	
Raymond, Ad. ....		360 00	
Rochon, Jos. ....		915 00	
Rochon, F. ....		365 00	
Rodgers, Walter ....		367 50	
Sage, P. ....		362 50	
Sage, J. F. ....		350 00	
<i>Carried forward</i> .....		38,811 31	275,380 24



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		38,811 31	275,380 24
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Concluded.</i>			
Sargeant, W. B. ....		367 50	
Sassiville, L. ....		360 00	
Scott, E. H. ....		367 50	
Shannon, R. J. ....		135 00	
Shelson, H. ....		367 50	
Spence, Wm. ....		347 50	
Sutton, Fred. ....		367 50	
Tromblay, E. ....		247 50	
Turner, John ....		112 50	
Vivaris, D. ....		915 00	
Vivaris, M. ....		365 00	
Wagner, H. W. ....		362 50	
Wallace, C. H. ....		102 50	
Williams, Chas. ....		305 00	
Willoughby, J. B. ....		332 50	
Wilson, H. P. ....		362 50	
Winder, A. ....		365 00	
Whitney, K. H. ....		330 00	
Young, R. J. ....	814 00		
Disbursements .....	657 15		
		1,471 15	
<i>Metagami Reserve—\$8,723.86.</i>			
Ainslie, D. ....		352 50	
Bracken, R. ....		365 00	
Bruster, H. S. ....		302 50	
Burden, John ....	835 00		
Disbursements .....	344 36		
		1,179 36	
Dundas, Geo. ....		257 50	
Eveline, A. ....		32 50	
Fraser, E. E. ....		392 50	
Gowinlock, R. W. ....		127 50	
Hatton, E. R. ....		285 00	
Henderson, C. E. ....		172 00	
Lawrence, C. F. ....		335 00	
Lower, A. R. M. ....		327 50	
Luke, A. ....		132 50	
Manerd, Napoleon ....		272 50	
Noble, C. V. ....		355 00	
Poisson, A. ....		365 00	
Reid, Jos. ....		392 50	
Smith, W. R. ....		310 00	
Sparks, W. E. L. ....		367 50	
Stewart, D. ....		307 50	
Taylor, J. S. ....		367 50	
Thorpe, G. H. ....		362 50	
Thurston, A. M. ....		370 00	
Wallace, J. B. ....		327 50	
Wallace, W. W. ....		342 50	
Wood, E. H. ....		322 50	
<i>Mississaga Reserve—\$11,965.01.</i>			
Albright, L. ....		7 50	
Arnill, L. ....		7 50	
Belanger, Thomas ....		182 50	
<i>Carried forward</i> .....		55,316 32	275,380 24

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		55,316 32	275,380 24
<i>FOREST RESERVES.—Continued.</i>			
<i>Mississaga Reserve.—Concluded.</i>			
Bickell, R. R. ....		290 00	
Blaney, A. ....		225 00	
Bondon, F. H. ....		295 00	
Bothwell, G. E. ....		267 50	
Burden, Wm. ....		400 00	
Burden, J. H. ....		172 50	
Cameron, Geo. ....		352 50	
Cameron, B. ....		302 50	
Copp, F. C. ....		292 50	
Cowper, J. W. ....		285 00	
Dean, T. B. ....		202 50	
Doolittle, G. W. ....		250 00	
Doolittle, Robert ....		320 00	
Doyle, Gus ....		285 00	
Duval, C. A. ....	835 00		
Disbursements	1,691 51		
		2,526 51	
Dyson, Isaac ....		300 00	
Edwards, H. S. ....		272 50	
Eveline, J. ....		225 00	
Eveline, A. ....		230 00	
Eveline, J. H. ....		160 00	
Featherstonhaugh, M. H. ....		300 00	
Ferguson, Julien ....		350 00	
Ferguson, J. B. ....		262 50	
Foot, W. S. ....		265 00	
Gordon, R. ....		290 00	
Hall, J. E. ....		167 50	
Haskell, H. R. ....		302 50	
Henderson, C. E., Disbursements		301 00	
Hewlett, R. C. ....		287 50	
Jean, Aug. ....		190 00	
Jones, R. D. ....		295 00	
Kingsford, M. R. ....		100 00	
Knox, D. ....		292 50	
Locke, W. D. ....		282 50	
Sawyer, C. E. ....		167 50	
Taylor, Chas. ....		260 00	
<i>Nepigon Reserve—\$8,568.17.</i>			
Absolon, W. ....		172 50	
Blair, Bert ....		5 00	
Bliss, L. E. ....	765 00		
Disbursements	1,360 67		
		2,125 67	
Bouchard, N. ....		240 00	
Davies, E. L. ....		320 00	
Dickson, H. A. ....		275 00	
Donley, J. P. ....		312 50	
Ferris, R. H. ....		332 50	
Fraser, Grant ....		352 50	
Greenwood, John ....		337 50	
Harris, R. J. ....		320 00	
Heffernon, J. J. ....		360 00	
<i>Carried forward</i> .....		72,237 00	275,380 24

Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		72,237 00	275,380 24
<b>FOREST RESERVES—Concluded</b>			
<b>NEPIGON RESERVE.—Concluded.</b>			
Higgins, Robt. ....		2 50	
Husband, A. C. ....		347 50	
Judge, S. E. ....		332 50	
King, G. A. ....		360 00	
Linklater, Wm. ....		275 00	
McDowell, T. W. ....		300 00	
Michael, A. ....		297 50	
Rae, A. ....		395 00	
Scott, C. V. ....		325 00	
Thompson, A. R. ....		45 00	
Ward, James ....		387 50	
Young, N. M. ....		347 50	
<i>Eastern Reserve—\$2,737.76.</i>			
Bishop, Hugh ....		375 00	
Brown, George ....		335 00	
Egan, Wm. ....		37 50	
Gilmour, John ....		375 00	
Shultz, James ....		335 00	
Tapping, Thomas	400 00		
Disbursements	135 26		
		535 26	
Watkins, Robert ....		375 00	
Young, William ....		30 00	
Young, George ....		340 00	
<i>Sibley Reserve—\$807.50.</i>			
Cross, J. G. ....		382 50	
Cross, R. J. ....		325 00	
Oliver, J. A. ....		100 00	
<i>Quetico Reserve.—\$4,407.95.</i>			
Armstrong R. ....		300 00	
Berrye, C. W. ....		300 00	
Brecken, F. E. ....		300 00	
Darby, W. ....		300 00	
Gadd, C. H. ....		300 00	
Gibson, W. F. ....		300 00	
Gilfoil, G. ....		300 00	
Hampshire, F. N. ....		300 00	
Johnston, R. ....		300 00	
McDonald, D. ....		300 00	
Murray, O. J. ....		300 00	
Oglesten, R. ....		300 00	
Wall, S. L. ....		300 00	
Wall, George ....		480 00	
Watts, George. Disbursements		27 95	
			83,605 21
<i>Carried forward</i> .....			358,985 45

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			358,985 45
MINES AND MINING.			
Miller, G. W., Provincial Geologist services .....	4,250 00		
Disbursements .....	359 41	4,609 41	
Knight, C. W., 1st Assistant Geologist services..	2,100 00		
Disbursements .....	479 30	2,579 30	
Burrows, A. G., 2nd Assistant Geologist services	2,000 00		
Disbursements .....	571 55	2,571 55	
Hopkins, P. E., 3rd Assistant Geologist services..	1,000 00		
Disbursements .....	166 47	1,166 47	
Mickle, G. R., Mine Assessor, services .....	4,000 00		
Disbursements .....	725 00	4,725 00	
Price, S., Mining Commissioner, services .....	3,700 00		
Disbursements .....	1,171 56	4,871 56	
Dance, R. W., Mining Commissioner's Clerk, ....	920 01		
Disbursements .....	458 48	1,378 49	
Corkill, E. T., Inspector of Mines, services .....	2,400 00		
Disbursements .....	976 30	3,376 30	
Sutherland, T. F., Assistant Inspector of Mines,	2,200 00		
services .....	1,356 30	3,556 30	
Disbursements .....			
Rogers, W. R., Topographer, services .....	1,700 00		
Disbursements .....	506 68	2,206 68	
McArthur, T. A., Inspector of Recorders' Offices,	650 00		
services .....	437 95	1,087 95	
Disbursements .....			
EXPLORATIONS, INVESTIGATIONS AND INSPECTIONS.			32,129 01
Coleman, Dr. A. P. Disbursements .....		399 04	
Freeman, D. ....	329 23		
Disbursements .....	23 55	352 78	
Greenland, C. W. ....		268 27	
Mahaffy, A. F. ....		76 92	
Parsons, A. L. ....	471 15		
Disbursements .....	630 90	1,102 05	
Scott, John .....	600 00		
Disbursements .....	225 50	825 50	
Sharpe, Donald .....	700 00		
Disbursements .....	187 15	887 15	
Smith, G. J. ....		294 23	
Smith, R. M. ....	314 42		
Disbursements .....	19 05	333 47	
<i>Carried forward</i> .....		4,539 41	391,114 46



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		4,539 41	391,114 46
EXPLORATIONS, INVESTIGATIONS AND INSPECTIONS.— <i>Concluded.</i>			
Stewart, R. B. ....	617 30		
Disbursements .....	173 59		
Stewart, Wm. ....		790 89	
Express .....		55 00	
		3 80	
			5,389 10
MINING RECORDERS.			
Bowker, S. T., Recorder .....	986 16		
Disbursements .....	319 12		
		1,305 28	
Bruce, A. E. D., Recorder .....	1,061 65		
Gauthier, G. H., Recorder .....	416 10		
Graham, F. W., Clerk .....	1,200 00		
Millard, C. S., Clerk .....	540 77		
O'Brien, J. D., Clerk .....	1,026 54		
Clarke, W. K., Clerk .....	258 27		
Keenan, H. F., Clerk .....	273 46		
Glazier, M. B., Clerk .....	636 92		
Disbursements .....	813 75		
		6,227 46	
Campbell, C. A. Recorder .....	886 50		
Gordon, T. C., Clerk .....	630 00		
Washburn, H., Clerk .....	724 59		
Glazier, M. B., Clerk .....	450 00		
Young, Miss E., Stenographer .....	483 08		
Disbursements .....	352 62		
		3,526 79	
Hough, J. A., Recorder .....	1,200 00		
Browning, A. J., Clerk .....	900 00		
Disbursements .....	537 94		
		2,637 94	
McQuire, H. F. ....	500 00		
Disbursements .....	159 30		
		659 30	
Morgan, J. W., Recorder .....	986 16		
Disbursements .....	311 05		
		1,297 21	
Sheppard, H. E., Recorder .....	1,000 00		
Disbursements .....	178 93		
		1,178 93	
Skill, Albert, Recorder .....	1,200 00		
Disbursements .....	273 96		
		1,473 96	
Smith, G. T., Recorder .....	2,300 00		
Meagher, T. J., Clerk .....	900 00		
Sarsfield, J. M., Clerk .....	1,100 00		
Ferguson, L. H., Clerk .....	717 50		
Monroe, Miss E., Stenographer .....	720 00		
Smith, Miss M. H., Stenographer .....	480 00		
Disbursements .....	660 00		
		6,877 50	
Spry, W. L., Recorder .....		635 83	
McArthur, T. A., Salary as Inspector for 3 months .....		300 00	
<i>Carried forward</i> .....		26,120 20	396,503 56

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		26,120 20	396,503 56
<i>MINING RECORDERS.—Concluded.</i>			
Dominion Express Company .....	145 74		
King's Printer .....	763 99		
Methodist Book Room .....	31 88		
Harcourt, E. H. Co., .....	147 29		
Rice, Lewis & Co. ....	87 65		
		1,176 55	
<i>PROVINCIAL ASSAY OFFICE.</i>			
Turner, N. L. ....	1,200 00		
Disbursements .....	41 85		
		1,241 85	
Rothwell, T. E. ....	1,060 26		
Disbursements .....	133 50		
		1,193 76	
Supplies .....		1,180 36	
Disbursements .....		154 12	
Equipment .....		634 27	
			4,404 36
<i>CULLERS' ACT.</i>			
Currie, D. H., Services .....		4 00	
Henderson, Charles, Disbursements .....		3 00	
McDougall, J. T. Disbursements .....		21 00	
Margach, Wm., Disbursements .....		2 50	
Advertising .....		6 80	
			37 30
<i>SPECIAL SERVICES AND UNFORESEEN EXPENSES.</i>			
Nicol, Wm., <i>re</i> Toronto Exhibition .....	300 00		
Disbursements .....	276 82		
		576 82	
Orser, E. H., <i>re</i> Windsor Exhibition .....	50 00		
Disbursements .....	77 14		
		127 14	
Turner, N. L., Disbursements .....		100 00	
Disbursements <i>re</i> Toronto Exhibition .....		462 02	
			1,265 98
<i>SURVEYS.</i>			
			123,016 46
<i>BOARD OF SURVEYORS</i> .....			
			200 00
<i>EXPERIMENTAL TREATMENT OF ORE</i> .....			
			428 50
<i>REFUNDS</i> .....			
			15,625 44
<i>CONTINGENCIES.</i>			
<i>Departmental</i>			
Printing and Binding .....	4,740 71		
Stationery .....	6,415 99		
		11,156 70	
Postage .....	1,814 26		
Express .....	295 74		
		2,110 00	
<i>Carried forward</i> .....		13,266 70	568,778 35

*Appendix No. 6.—Concluded.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		13,266 70	568,778 35
CONTINGENCIES.— <i>Concluded.</i>			
Departmental.— <i>Concluded.</i>			
Telegraphing .....	504 36		
Bell Telephone Company .....	90 30		
Car Fare .....	30 00	624 66	
Subscriptions .....	227 75		
Advertising .....	4,802 14	5,029 89	
Maps .....		257 21	
Typewriters, rent and repairs .....		556 95	
Hearst, Hon. W. H., Travelling expenses .....	250 00		
Kirkpatrick, G. B., Travelling expenses .....	15 50		
Ledger, W. R., Travelling expenses .....	35 65		
Rorke, L. V., Travelling expenses .....	100 00		
St. John, C. W. Travelling expenses .....	25 00		
White, Aubrey, Travelling expenses .....	489 50		
Whitson, J. F., Travelling expenses .....	73 60		
Stewart, A. M., Legal Fees .....	275 00	1,264 25	
Extra Clerks .....	4,484 03		
Sundries .....	331 60	4,815 63	
BUREAU OF MINES.			25,815 29
Printing and Binding .....	1,101 02		
Stationery .....	2,682 01	3,783 03	
Postage .....	425 46		
Telegraphing .....	257 95		
Express and Cartage .....	34 40		
Advertising .....	1,324 84		
Subscriptions .....	169 81		
Maps .....	2,143 10	4,355 56	
Gibson, T. W., Travelling expenses .....	7 30		
Whitson, J. F., Travelling expenses .....	14 45	21 75	
Typewriter repairs .....	29 80		
Bell Telephone Company .....	51 85	81 65	
Extra Clerks .....		70 01	
Legal Fees .....	89 50		
Nattress, Rev. Thos., Drawings for report .....	200 00		
Nicholas, F. J., Preparing Index .....	75 00		
Sundries .....	512 17	876 67	
			9,188 67
			603,782 31

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister, Lands and Forests.

*Appendix No. 7.*

Statement of Expenses on account of various services under the direction of the Department of Lands, Forests and Mines for the year ending October 31st, 1912.

Service.	\$	c.	\$	c.	\$	c.
ALGONQUIN PARK .....					20,468	10
RONDEAU PARK .....					4,003	29
VETERANS' COMMUTATION .....					1,050	00
CLEARING AREA RE TOWNSITES .....					2,333	30
EXPLORATION PARTY IN NEW TERRITORY .....					10,000	00
NORTHERN DEVELOPMENT .....						
Whitson, J. F. Salary .....	1,666	66				
Bruce, A. E. D. do .....	525	00				
Robinson, W. J. do .....	633	06				
Lye, R. G. do .....	434	07				
Mahon, G. H. do .....	318	51				
Beardall, F. G. do .....	258	65				
Buchan, W. E. do .....	292	97				
Grey, F. B. do .....	318	51				
Ewing, S. B. do .....	119	11				
Smith, Miss I. do .....	10	00				
Ryan, Miss H. do .....	146	66				
Bauldry, F. do .....	30	00				
Office Expenses .....	1,694	56				
				6,447	76	
Wages .....	108,633	66				
Contracts .....	28,227	82				
Camp equipment, etc. ....	12,800	98				
Supplies .....	36,542	38				
Sundries .....	430	20				
				186,635	04	
						193,082 80
BOUNTY ACT VII., EDWARD VII., CAP. 14						
Delora Mining Reduction Company .....				1,432	20	
Coniagas Reduction Company .....				1,164	60	
						2,596 80
						233,534 29

D. GEO. ROSS,  
Accountant.

AUBREY WHITE.  
Deputy Minister of Lands and Forests.



Appendix No. 8.

WOODS AND FORESTS.

Statement of revenue collected during the year ending October 31st, 1912.

	\$	c.
Amount of Western collections at Department.....	1,781,789	10
do Belleville collections.....	27,610	53
do Ottawa collections.....	176,263	15
	1,985,662	78

J. A. G. CROZIER,  
Chief Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 9.*

## PATENTS BRANCH.

Statement of Patents, etc., issued by the Patents Branch from 1st November, 1911, to  
31st October, 1912.

Crown Lands .....	902
School do .....	25
Mining do .....	596
Public do (late Clergy Reserves).....	10
Free Grant Lands (A. A.).....	97
do (Act of 1880).....	460
Mining Leases .....	378
Licenses of Occupation.....	21
Crown Leases.....	11
Crown Lands (University) .....	21
Mining do do .....	1
Free Grant, (Act of 1901) Veterans .....	911
Rondeau Leases .....	4
Pine.....	2
Total .....	3,439

CHARLES S. JONES,  
Chief Clerk.

AUBREY WHITE,  
Deputy Minister.

Appendix

WOODS AND

Statement of Timber and Amounts accrued from Timber Dues, Ground

QUANTITY AND

Agencies.	Area covered by timber licenses.	Saw logs.			
		Pine.		Other.	
	Square miles.	Pieces.	Feet B.M.	Pieces.	Feet B.M.
Western Timber District .....	12,469 $\frac{1}{4}$	8,942,229	373,393,923	1,145,543	38,575,660
Belleville Timber District .....	610	336,003	9,400,281	195,898	6,340,333
Ottawa Timber District .....	5,331 $\frac{1}{2}$	1,661,792	78,870,197	462,684	17,260,160
	18,410 $\frac{3}{4}$	10,940,024	461,664,401	1,804,125	62,176,153

General Statement

Agencies.	Cordwood.		Tan Bark.	Railway Ties.	Posts.	Poles.	Stave Bolts.	Shingle Blocks.	Pulpwood.
	Hard.	Soft.							
	Cords.	Cords.							
Western Timber District .....	43,822	44,376	5,920	5,703,774	481	13,617	2,093	66	130,345
Belleville Timber District .....	205	.....	.....	30	$\frac{4}{5}$	70	.....	.....	17
Ottawa Timber District .....	24	1,986	.....	655	17 $\frac{1}{2}$	1,680	.....	.....	9,976
	44,051	46,362	5,920	5,704,459	499	15,367	2,093	66	140,338

J. A. G. CROZIER,  
Chief Clerk in Charge

No. 10.

FORESTS.

Rent and Bonus during the year ending 31st October, 1912.

DESCRIPTION OF TIMBER.

Boom and Dimension.				Square Timber.				Piling.		
Pine.		Other.		Pine.		Oak and Ash.		Tam- arac.	Tamarac.	
Pieces.	Feet B.M.	Pieces.	Feet B.M.	Pieces.	Cubic feet.	Pieces	Cubic feet.	Lineal feet.	Pieces	Ft. B.M.
164,258	18,339,981	49,115	4,883,489	8,720	416,097	.....	.....	112,256	1,887	250,724
1,259	197,112	3,486	685,584	.....	.....	.....	.....	.....	.....	.....
22,230	2,251,284	10,368	1,377,622	748	32,727	{ o 4 a 14 }		124 566	.....	.....
187,747	20,788,377	62,969	6,946,695	9,468	448,824	18	690	112,256	1,887	250,724

of Timber.—Concluded.

Amounts accrued.

Trans- fer bonus.	Interest.	Trespass.	Timber dues.	Bonus.	Deposits timber sales 1912.	Ground rent.	Total.
\$ c	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
7,640 00	11,296 08	6,470 55	1,184,194 36	485,926 44	111,550 83	64,567 00	1,871,645 26
720 00	92 71	129 25	19,824 24	.....	.....	4,780 00	25,546 20
380 00	575 97	615 37	142,675 40	.....	.....	26,622 18	170,868 92
8,740 00	11,964 76	7,215 17	1,346,694 00	485,926 44	111,550 83	95,969 18	2,068,060 38

AUBREY WHITE,  
Deputy Minister.



*Appendix No. 11.*

Statement of the work done in the Military Branch of the Department of Lands, Forests and Mines, during the year 1912.

Letters received.....	6,150
"    written.....	5,900
Maps and reports supplied to veterans.....	1,850
Printed forms issued.....	1,200
Locations made .....	139
Location certificates issued.....	14
Certificates surrendered .....	21
Certificates applied in payment of lands.....	53
References for patents issued.....	997

H. E. JOHNSTON,  
Chief Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 12.*

Statement of the number of Letters received and mailed by the Department in 1909-10, 1910-11 and 1911-12.

Year,	Letters received.					Names indexed.	Orders-in-Council.	Returned letters.	Letters, circulars and reports mailed from Department.
	Sales and Free Grants.	Surveys.	Woods and Forests.	Mines.	Totals.				
1909-10.	23,700	18,290	9,752	8,498	60,240	67,210	201	81	69,400
1910-11.	24,705	14,478	9,212	8,220	56,615	63,200	180	94	67,150
1911-12.	20,050	10,150	7,700	87,507	50,407	57,000	150	76	63,125

FRANK YEIGH,  
Registrar,

AUBREY WHITE,  
Deputy Minister.

## Appendix No. 13.

Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties and of patents issued in Free Grant Townships during the year ending 31st October, 1912.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Baxter .....	Muskoka. ....	J. B. Brown, Bracebridge...	14	1,723	2	45	5	11
Brunel .....	"	"	1	100	...	...	...	6
Cardwell .....	"	"	2	400	1	58	3	6
Chaffey .....	"	"	...	...	1	75	...	2
Draper .....	"	"	...	...	...	...	...	...
Franklin .....	"	"	3	253	4	73	3	3
Freeman .....	"	"	2	400	...	...	1	2
Macaulay .....	"	"	4	447	...	...	4	...
Medora ...	"	"	4	696	2	11	4	8
Monck .....	"	"	...	...	2	17	...	2
Morrison .....	"	"	3	490	9	70	2	12
Muskoka .....	"	"	5	510	3	10	4	3
McLean .....	"	"	2	183	1	37	3	2
Oakley .....	"	"	2	203	1	26	...	1
Ridout .....	"	"	2	285	...	...	1	1
Ryde .....	"	"	4	598	1	8	1	2
Sherborne....	Haliburton ...	"	1	76	...	...	...	2
Sinclair....	Muskoka .....	"	6	815	2	45	6	4
Stephenson....	"	"	...	...	...	...	...	2
Stisted .....	"	"	3	250	1	4	3	3
Watt .....	"	"	1	50	...	...	1	2
Wood .....	"	"	6	862	3	8	10	31
Burpee .....	Parry Sound..	F. R. Powell, Parry Sound..	4	695	...	...	...	2
Carling .....	"	"	8	898	...	...	5	18
Christie .....	"	"	10	1,394	1	5	5	4
Conger .....	"	"	4	586	3	12	5	16
Cowper .....	"	"	...	...	1	40	...	13
Ferguson ..	"	"	4	697	...	...	1	3
Foley .....	"	"	1	100	1	25	2	4
Hagerman ..	"	"	...	...	...	...	1	...
Harrison .....	"	"	...	...	10	111	...	46
Humphrey .....	"	"	3	336	5	128	2	5
McConkey....	"	"	4	578	1	18	2	2
McDougall ...	"	"	5	702	2	6	...	3
McKellar .....	"	"	4	571	...	...	4	1
McKenzie .....	"	"	...	...	1	37	...	3
Monteith .....	"	"	5	653	...	...	1	3
Shawanaga ..	"	"	1	97	2	16	1	20
Wilson .....	"	"	1	200	...	...	1	1
Chapman ....	Parry Sound .	Dr. J. S. Freeborn, Magnet- awan	2	264	...	...	2	5
Croft .....	"	"	3	400	...	...	4	3
Ferrie .....	"	"	...	...	...	...	...	...
Gurd .....	"	"	1	101	2	101	...	5
Lount....	"	"	4	578	1	29	3	8
Machar .....	"	"	7	1,064	1	99	7	8
Mills .....	"	"	5	800	1	85	1	3
Pringle .....	"	"	...	...	...	...	...	...

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Ryerson.....	Parry Sound..	Dr. J. S. Freeborn, Magnet- awan.	6	660	.....	.....	8	6
Spence .....	"	" " "	8	1,053	2	55	7	4
Strong .....	"	" " "	1	100	.....	.....	1	1
Armour.....	Parry Sound..	W. Jenkin, Emsdale. ....	7	764	1	100	4	8
Bethune .....	"	" "	2	258	.....	.....	3	4
Joly .....	"	" "	.....	.....	2	191	.....	6
McMurrich ...	"	" "	.....	.....	.....	.....	.....	.....
Perry .....	"	" "	.....	.....	.....	.....	.....	.....
Proudfoot ....	"	" "	1	182	.....	.....	.....	4
Hardy .....	Parry Sound..	H. J. Ellis, Powassan.. ....	.....	.....	1	1	.....	2
Himsworth ..	"	" "	14	1,785	5	246	9	12
Laurier .....	"	" "	3	400	.....	.....	1	5
Nipissing .....	"	" "	3	405	12	717	1	10
Patterson....	"	" "	2	300	1	7	.....	2
Bonfield.....	Nipissing ....	W. J. Parsons, North Bay...	9	939	.....	.....	3	6
Boulter (pt) ..	"	" "	.....	.....	.....	.....	.....	.....
Chisholm ....	"	" "	3	375	4	893	4	11
Ferris .....	"	" "	24	2,382	2	7	14	15
Anson .....	Haliburton ...	R. H. Baker, Minden.....	2	200	1	1	1	.....
Glamorgan ..	"	" "	7	989	.....	.....	6	5
Hindon .....	"	" "	.....	.....	.....	.....	.....	.....
Lutterworth..	"	" "	3	295	1	26	2	1
Minden .....	"	" "	1	114	.....	.....	2	3
Snowdon ....	"	" "	3	394	.....	.....	3	1
Stanhope ....	"	" "	1	105	1	56	1	3
Anstruther ...	Peterboro'.	William Hales, Apsley .....	6	500	.....	.....	6	.....
Burleigh, N.D.	"	" "	.....	.....	.....	.....	.....	1
" S.D.	"	" "	.....	.....	.....	.....	.....	.....
Chandos .....	"	" "	2	200	.....	.....	1	1
Methuen .....	"	" "	.....	.....	.....	.....	.....	.....
Cardiff.....	Haliburton ...	James Wilson, Kinmount...	4	460	.....	.....	3	1
Cavendish....	Peterboro'....	" "	8	1,148	1	49	4	1
Galway .....	Peterboro'....	" "	8	845	.....	.....	5	4
Monmouth ...	Haliburton ...	" "	11	1,513	.....	.....	7	3
Bangor .....	Hastings ....	W. J. Douglas, Greenview....	4	500	1	10	2	.....
Carlow .....	"	" "	1	100	.....	.....	.....	.....
Cashel .....	"	" "	.....	.....	.....	.....	.....	.....
Dungannon .	"	" "	4	497	1	3	1	2
Faraday .....	"	" "	7	857	1	52	1	5
Herschel .....	"	" "	8	832	.....	.....	8	2
Limerick.....	"	" "	3	500	.....	.....	2	1
Mayo .....	"	" "	.....	.....	.....	.....	1	4
Monteagle ...	"	" "	5	697	1	1	.....	2
McClure .....	"	" "	1	105	2	9½	.....	.....
Wicklow ....	"	" "	5	825	1	10	.....	.....
Wollaston....	"	" "	1	111	1	17	1	2
Algona, S.....	Renfrew .....	Adam Prince, Wilno.....	1	100	.....	.....	.....	4
Brougham ...	"	" "	1	100	.....	.....	.....	2
Brudenell ...	"	" "	3	400	.....	.....	3	.....

*Appendix No. 13.—Continued.*

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Burns .....	Renfrew ....	Adam Prince, Wilno.....	5	686	...	...	5	2
Grattan .....	"	"	5	634	3	21	2	7
Griffith .....	"	"	...	...	...	...	...	...
Hagarty .....	"	"	5	812	...	...	3	1
Jones .....	"	"	2	337	1	32	3	2
Lyell .....	Nipissing ....	"	5	695	2	17	4	1
Lyndoch .....	Renfrew ....	"	4	502	...	...	1	3
Matawatchan.	"	"	1	97	1	2	...	3
Radcliffe .....	"	"	6	756	1	2	2	5
Raglan .....	"	"	5	471	...	...	3	4
Richards .....	"	"	...	...	...	...	...	1
Sebastopol ..	"	"	2	237	...	...	1	1
Sherwood ....	"	"	7	937	1	99	6	4
Algona, N....	Renfrew .....	D. B. Warren, Pembroke....	4	311	...	...	2	...
Alice .....	"	"	2	136	...	...	1	...
Buchanan (pt)	"	"	2	281	1	62	3	1
Fraser .....	"	"	...	...	...	...	...	2
Head .....	"	"	...	...	...	...	...	1
Maria .....	"	"	...	...	...	...	...	...
McKay (pt) ..	"	"	...	...	...	...	1	...
Petawawa ...	"	"	2	200	3	6	2	2
Rolph .....	"	"	1	100	1	1½	...	1
Wilberforce ..	"	"	...	...	...	...	...	...
Wylie (pt)....	"	"	2	241	...	...	2	2
Calvin .....	Nipissing ....	Robert Small, Mattawa. . .	3	283	...	...	1	2
Cameron (pt).	"	"	2	176	...	...	...	...
Lauder .....	"	"	...	...	...	...	...	...
Mattawan....	"	"	5	631	3	4	1	...
Papineau ....	"	"	9	997	1	8	7	3
Korah .....	Algoma .. ...	Edw'd Noble, Sault Ste. Marie	1	80	...	...	1	...
Parke .....	"	"	...	...	1	151	1	6
Prince .....	"	"	5	732	1	17	6	3
Aberdeen ....	Algoma .....	Thos. Buchanan, Thessalon.	2	240½	1	3	...	7
" add.	"	"	...	...	...	...	...	...
Galbraith ....	"	"	2	317½	1	1½	...	10
Lefroy .....	"	"	...	...	...	...	...	1
Plummer .....	"	"	...	...	...	...	...	...
" add.	"	"	...	...	...	...	...	...
St. Joseph Is'd	Algoma .....	W. E. Whybourne, Marksville	12	1,282	...	...	11	1
Baldwin (pt.).	Algoma .....	Neil Mulvaney, Espanola...	18	2,558	...	...	1	2
Merritt.....	"	"	9	1,058	4	255	1	6
Blake.....	Thunder Bay.	W. A. Burrows, Port Arthur	14	2,074	...	...	8	13
Conmee .....	"	"	23	3,733	11	719	20	15
Crooks .....	"	"	24	3,552	1	30	9	3
Dawson Road.	"	"	49	5,108	10	364	35	...
Dorion .....	"	"	10	1,511	1	66	6	19
Gillies .....	"	"	11	1,560	3	35½	8	8
Gorham.....	"	"	78	11,904	19	2,321	44	12
Lybster .....	"	"	8	1,085	2	198	7	5
Marks.....	"	"	12	1,918	7	487	9	11



## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
McGregor ....	Thunder Bay.	W. A. Burrows, Port Arthur	70	11,265	9	980	27	6
McIntyre ....	"	"	3	349	2	160	3	8
O'Connor....	"	"	16	2,489	7	350	14	9
Oliver.....	"	"	16	2,572 $\frac{1}{2}$	12	662	16	10
Paipoonge, N R	"	"	.....	.....	.....	.....	.....	8
" S R	"	"	8	773	1	100	9	5
Pardee.....	"	"	.....	.....	.....	.....	.....	8
Pearson.....	"	"	15	2,315 $\frac{1}{2}$	2	14	9	7
Scoble.....	"	"	27	3,898 $\frac{1}{2}$	23	555	13	22
Strange.....	"	"	24	3,716 $\frac{1}{2}$	13	1,264	13	5
Ware .....	"	"	80	12,454	17	885	28	9
Atwood ..	Rainy River..	William Cameron, Stratton..	1	161	.....	.....	2	.....
Blue .....	"	"	14	1,888	10	299	12	16
Curran....	"	"	4	644	2	42	5	1
Dewart .....	"	"	.....	.....	1	40	1	3
Dilke .....	"	"	1	162	2	3	1	1
Morley .....	"	"	15	2,189	5	167	13	3
Morson .....	"	"	26	3,956	17	780	20	.....
McCrosson ...	"	"	8	1,119	10	458	10	4
Nelles.....	"	"	16	2,432	5	128	11	10
Pattullo... ..	"	"	16	2,259	4	204 $\frac{1}{2}$	12	4
Pratt .....	"	"	5	801	2	42	3	11
Rosebery .....	"	"	.....	.....	.....	.....	.....	.....
Shenston.....	"	"	4	646	5	92	4	6
Sifton .....	"	"	16	2,554	9	470	12	12
Spohn .....	"	"	6	871	7	300	9	10
Sutherland... ..	"	"	18	3,181	3	156	21	12
Tait .....	"	"	12	1,671	5	221 $\frac{1}{2}$	7	7
Tovell .....	"	"	4	720	4	169	4	8
Worthington..	"	"	3	242	1	80	2	1
Aylsworth ...	Rainy River .	Alex. McFayden, Emo .....	.....	.....	.....	.....	.....	2
Barwick .....	"	"	1	118	.....	.....	.....	.....
Burriss .....	"	"	7	1,134	5	202 $\frac{1}{2}$	7	10
Carpenter....	"	"	9	1,516	5	247	8	9
Crozier .....	"	"	7	989	9	194	8	8
Dance.....	"	"	20	3,299	4	163	15	8
Devlin .....	"	"	9	1,388	.....	.....	6	6
Dobie .....	"	"	12	1,816	5	281	11	6
Fleming .....	"	"	1	160	.....	.....	1	5
Kingsford... ..	"	"	29	4,574	6	243	23	9
Lash .....	"	"	4	527	5	677	2	8
Mather .....	"	"	10	1,480	11	556	7	10
Miscampbell .	"	"	13	2,113	1	40	8	11
Potts .....	"	"	50	7,792	3	124	38	4
Richardson...	"	"	24	3,969	3	279	17	10
Roddick.....	"	"	.....	.....	.....	.....	.....	1
Woodyatt ....	"	"	2	149	.....	.....	1	.....
Aubrey .....	Kenora .....	R. H. Pronger, Dryden .....	23	3,518	6	320	10	13
Eton .....	"	"	27	3,823	1	80	14	2
Langton .....	"	"	2	320	.....	.....	.....	.....
Melgund .....	"	"	15	2,031	.....	.....	9	2
Mutrie.....	"	"	6	785 $\frac{1}{2}$	1	56	5	4
Rugby .....	"	"	1	160	.....	.....	.....	3
Sanford.....	"	"	6	880	.....	.....	7	2
Southworth..	"	"	12	1,639	.....	.....	3	5
Temple .....	"	"	7	1,108 $\frac{1}{2}$	.....	.....	5	.....

## Appendix No. 13.—Concluded.

Township.	District or County.	Agent.	No. of persons located.	No of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Van Horne ...	Kenora .....	R. H. Pronger, Dryden.....	3	314	...	...	4	2
Wabigoon ....	"	"	20	2,914	5	345	10	...
Wainwright ..	"	"	9	1,217	...	...	11	1
Zealand .....	"	"	18	2,219	6	229	6	4
Melick .....	Kenora .....	W. L. Spry, Kenora .....	17	2,462	2	70	10	1
Pellatt .....	"	"	16	2,111	3	127	10	5
Blezard .....	Sudbury.....	J. A. Lemieux, Blezard	3	480	1	6	11	2
Capreol .....	"	" Valley	7	1,071	6	480	3	11
Hanmer .....	"	"	7	964	1	2 $\frac{3}{4}$	2	9
Lumsden.....	"	"	9	1,282	1	1 $\frac{1}{2}$	....	6
Balfour .....	Sudbury .....	J. K. MacLennan, Sudbury ..	12	1,705	1	155 $\frac{1}{2}$	6	8
Broder .....	"	"	16	2,213	2	161	6	4
Chapleau.....	Algoma .....	"	...	...	...	...	...	...
Dill .....	Sudbury .....	"	5	647	4	709	1	11
Garson .....	"	"	5	827	1	4 $\frac{1}{2}$	1	4
Morgan (pt) ..	"	"	4	475	...	...	...	6
Neelon.....	"	"	9	1,195	8	1,228	....	15
Rayside.....	"	"	2	171	1	102	....	1
Appleby .....	Sudbury .....	Emile Langlois, Warren.....	4	572	3	10	6	2
Casimir .....	"	"	3	479	1	4	2	3
Dunnet .....	"	"	7	929 $\frac{1}{2}$	1	1 $\frac{1}{2}$	1	3
Hagar .....	"	"	2	317 $\frac{1}{2}$	2	49 $\frac{1}{2}$	1	2
Jennings .....	"	"	8	1,214	...	...	2	1
Kirkpatrick ..	Nipissing ...	"	10	1,475	2	171 $\frac{1}{2}$	....	5
Ratter .....	Sudbury .....	"	7	1,076	1	163	1	3
Caldwell .....	Nipissing ....	J. A. Philion, Sturgeon Falls.	9	1,194 $\frac{1}{2}$	1	1 $\frac{1}{2}$	....	12
Cosby .....	Sudbury .....	"	9	1,299	3	164	....	11
Grant .....	Nipissing ...	"	7	1,061	...	...	1	1
Macpherson ..	"	"	6	874	...	...	1	2
Martland .....	Sudbury .....	"	9	1,470 $\frac{1}{2}$	1	2 $\frac{1}{2}$	2	8
Springer .....	Nipissing ....	"	4	490	...	...	2	7
Abinger.....	Lennox and Addington	Charles Both, Denbigh .....	2	200	...	...	2	....
Canonto, S....	Frontenac....	"	1	100	...	...	...	1
" N....	"	"	...	...	...	...	...	...
Clarendon....	"	"	3	251	...	...	5	....
Denbigh....	Lennox and Addington	"	2	204	...	...	2	1
Miller (pt.)...	Frontenac....	"	1	100	...	...	1	....
Palmerston (pt.)	"	"	...	...	...	...	1	1
Airy .....	Nipissing ....	Unattached .....	2	298	...	...	...	1
Finlayson ...	"	"	1	133	1	4 $\frac{1}{10}$	....	2
Murchison ...	"	"	2	301	1	1	....	....
Sabine .....	"	"	8	950	...	...	3	....
			1675	237,152	489	24,815	1030	1095

W. C. CAIN,  
Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 14.*

Statement of Municipal Surveys for which instructions issued during the 12 months, ending  
October 31st, 1912.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.
1	F. M. Eagleson ..	683a	Nov. 1st, 1911...	To survey the road allowance between the 7th and 8th concessions of the township of Williamsburgh, from the east limit of lot 25, or the nearest undisputed monument, to the west limit of the township, and to define the limits of said road allowance by permanent monuments on each side thereof.
2	S. B. Code .....	684	Feb. 2nd, 1912...	To survey the road allowance between the 6th and 7th concessions of the township of Marlborough, in the county of Carleton, opposite lots 1, 2, 3 and 4, or as much farther as may be necessary to find an original monument, and to define by permanent stone or other monuments the limits of said road allowance.
3	T. J. Patten.....	685	July 11th, 1912...	To survey the rear boundary of lots 24, 25, 26, 27, 28, 29, 30, 31, 32 and 33, of concession No. 2, in the township of Assiginack, being the road allowance in rear of the lots fronting on the road to Michael's Bay, and have the same defined by permanent monuments on each side of said road allowance, and also the front of lots Nos. 20, 21 and 22 on the 6th and 7th concession road allowance and to have the corners of said lots defined by permanent monuments.
4	E. T. Wilkie.....	686	Sept. 27th, 1912.	To survey the line between concessions 7 and 8 from lots 9 to 13 in the township of Hinchinbrooke, or as much farther on each side as an original post can be found.

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 15.*

Statement of Municipal Surveys confirmed during the 12 months ending October 31st, 1912.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.	Date when confirmed under R.S.O., 1897, Chap. 181, secs. 10-15 inclusive.
1.	William H. Fairchild.	666	May 2nd, 1908...	To survey the road allowance between the 3rd and 4th concessions of the township of East Oxford, in the county of Oxford, across lots Nos. 16 to 18, inclusive, or as much farther on either side as may be necessary to find an original monument, and to mark the road allowance across lots Nos. 16 to 18, inclusive, with permanent monuments on each side of said road allowance.	Dec 29, 1911.
2.	W. J. Moore .....	683	Aug. 24th, 1911.	To survey the original road allowance between the 6th and 7th concessions of the township of Elmsley North, in the county of Lanark, from Lot 22 to Lot 30, inclusive, or between such points in which an original or undisputed point can be found and to define said road allowance by permanent stone or iron monuments on each side thereof, in accordance with the provisions of the Revised Statutes of Ontario, 1897, Chapter 181, Section 14.	Dec. 14, 1911.

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.



*Appendix No. 16.*

Statement of Crown Surveys in progress during the twelve months ending October 31st, 1912.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount Paid.	
				\$	c.
1	May 4, 1911.	R. W. Demorest ..	Survey of islands in Lake of the Woods, District of Kenora .....	1,600	00
2	May 14, 1912.	Lang & Ross.....	Survey of township outlines, District of Algoma .....	5,000	00
3	May 20, 1912.	Speight & Van Nstrand.....	Survey of township outlines, District of Algoma and township of Mulloy .....	8,500	00
4	May 20, 1912.	H. J. Beatty .....	Survey of township outlines, District of Algoma .....	4,500	00
5	May 21, 1912.	Andrew Bell.....	Survey of township of Sargeant, District of Timiskaming .....	2,400	00
6	May 22, 1912.	J. Hutcheon .....	Survey of township of Shackleton, District of Timiskaming .....	4,500	00
7	May 21, 1912.	C. H. Fullerton..	Survey of township of Stoddart, District of Algoma .....	3,800	00
8	May 21, 1912.	J. W. Pierce.....	Survey outlines of townships, District of Algoma .....	4,500	00
9	May 27, 1912.	D. J. Gillon.....	Survey of township of Mathieu, District of Rainy River .....	2,300	00
10	July 9, 1912..	J. W. Fitzgerald..	Survey of township outlines, District of Sudbury .....	4,800	00
11	June 7, 1912..	G. L. Brown .....	Survey of township of McMillan, District of Algoma .....	4,500	00
12	July 10, 1912.	T. J. Patten.....	Survey of township outlines, District of Algoma .....	3,800	00
13	May 29, 1912.	H. O. Dempster...	Survey of part of the township of Nansen, District of Timiskaming .....	1,800	00
14	July 17, 1912.	McAuslan & Anderson.....	Survey of township of Way, District of Algoma .....	4,200	00
15	June 5, 1912.	G. P. Angus.....	Survey of part of the township of Hanlan, District of Algoma .....	1,800	00
16	July 13, 1912.	Cavana & Watson.	Survey of township outlines, District of Algoma .....	4,500	00
17	June 17, 1912.	E. D. Bolton .....	Survey of Dawson Road Lots, District of Thunder Bay .....	2,100	00
18	July 17, 1912.	A. S. Code .....	Survey of township outlines, District of Algoma, and township of Studholm, District of Algoma .....	4,500	00
19	July 12, 1912.	Patterson & Byrne.	Survey of part of township of Mattawan, District of Nipissing .....	2,000	00
20	June 24, 1912.	Coltham & Coltham	Survey of part of township of Casgrain, District of Algoma .....	2,800	00
21	Oct. 10, 1912.	C. H. Fullerton ...	Survey of timber berths in township of Mulligan, District of Timiskaming .....	100	00
22	June 10, 1912.	C. E. Fitton .....	Inspection of Surveys, 1912 .....	1,500	00
				75,500	00

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 17.*

Statement of Crown Lands surveyed, completed and closed during the 12 months, ending  
October 31st, 1912.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of acres.
				\$ c.	
1	May 29, 1911...	A. Bell.....	To survey outlines of new townships, District of Nipissing .....	204 02	
2	June 10, 1911...	D. Beatty.....	To survey islands in Georgian Bay, in front of Conger and Cowper..	263 72	
3	July 25, 1911 & June 20, 1911.	E. D. Bolton...	To survey tract of land near Mack Station, District of Thunder Bay, and survey of township of Lyon, additional .....	656 27	6,149
4	May 2, 1911 ...	H. J. Beatty...	To survey township outlines, District of Sudbury .....	283 30	
5	June 20, 1911...	Code & Code...	To survey township outlines, District of Sudbury .....	246 10	
6	May 4, 1911.....	J. S. Dobie ....	To survey township outlines, District of Sudbury .....	293 28	
7	May 17, 1911...	C. H. Fullerton	To survey township outlines, District of Nipissing .....	276 80	
8	June 8, 1911....	J. W. Fitzgerald.	To survey township outlines, District of Sudbury .....	249 77	
9	July 18, 1911...	T. D. Green....	To survey islands in Gun and Sand Lakes, Winnipeg River, District of Kenora .....	378 44	
10	June 17, 1911...	D. J. Gillon....	To survey islands in Rainy Lake, District of Rainy River .....	508 35	
11	July 31, 1911...	A. D. Griffin....	To traverse Sesekinika Lake, District of Nipissing .....	309 92	
12	June 12, 1911..	Jas. Hutcheon..	To survey Base and Meridian lines, District of Sudbury and Township of Machin .....	277 00	53,812
13	July 21, 1911...	J. E. Jackson...	To survey Base and Meridian lines, District of Nipissing .....	241 25	
14	June 28, 1911...	Paulin & Anderson....	To survey Zealand additional, and townsite in Wabigoon township, District of Kenora .....		17,644
15	June 28, 1911...	Sutcliffe & Neelands....	To traverse the Mattagami River, District of Sudbury .....	2,509 20	
16	June 2, 1911....	J. J. Newman...	To survey township outlines, District of Nipissing .....	1,164 32	
17	May 20, 1911...	Speight & VanNostrand.	To survey base and meridian lines, District of Sudbury .....	1,517 50	
18	June 8, 1911...	Walter Smith...	To traverse lakes and rivers, lying between Bisco Station and Mattagami Lake, District of Sudbury .....	195 03	
19	Sept. 10, 1911...	D. J. Gillon....	Survey of timber berth W.10, Quetico Forest Reserve .....	518 50	
20	May 23, 1912...	E. H. Low.....	Survey of township outlines, District of Sudbury .....	5,153 30	
21	May 28, 1912...	Jas. S. Dobie...	Survey of the township of Kendall, District of Algoma .....	5,242 20	52,422
22	June 25, 1912...	W. Smith.....	Survey of township outlines, District of Sudbury .....	4,633 80	
23	June 18, 1912...	Code & Code...	Survey of outlines District of Sudbury .....	2,234 10	
24	June 21, 1912...	Code & Code...	Survey of line between Timiskaming and Nipissing .....	595 80	
25	June 7, 1912...	A. D. Griffin...	Survey of township of Gill District of Algoma .....	5,188 60	51,886

*Appendix No. 17.—Continued.*

Statement of Crown Lands surveyed, completed and closed during the 12 months.—Continued.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of acres.
				\$ c.	
26	June 19, 1912...	David Beatty...	Survey of township of Fauquier, District of Algoma, and survey of part townships of Wallbridge and Mowat .....	2,561 87	34,861
27	June 26, 1912...	Sutcliffe & Neelands...	Survey of township outlines, District of Algoma .....	5,192 37	
28	Oct. 10, 1912....	C. H. Fullerton	Survey of timber berths in Mulligan, District of Nipissing .....	687 95	
29	June 21, 1912 ..	Code & Code...	Survey of township outlines, District of Temiskaming .....	1,684 38	
30	June 8, 1912....	W. J. Moore....	Survey of land at Armstrong Divisional point .. ..	178 95	
31	May 21, 1912...	W. Smith.....	Survey of timber berth No. 9, District of Temiskaming .....	649 45	
		C. Tarling & Co	Mounting maps . . . . .	316 59	
		E. H. Harcourt & Co.....	Lithographing maps .....	2,349 25	
		Rice Lewis & Sons.....	Iron posts . . . . .	190 00	
		E. R. Watts & Sons.....	For purchase of reflecting level ...	46 00	
		Maurice Derourard..	Draughtsman on R. W. DeMorest's survey party on survey of islands in Lake of the Woods .....	519 10	
				47,516 46	

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 18.*SURVEY OF LINE BETWEEN THE DISTRICTS OF TIMISKAMING AND NIPISSING, FROM  
THE SOUTH ANGLE OF THE TOWNSHIP OF CASSELS EAST TO LAKE  
TIMISKAMING.

COBALT, Ont., October 17th, 1912.

SIR.—In accordance with instructions from your Department, bearing date June 21st, 1912, I have the honour to submit the following report on the survey of a Base Line forming a portion of the boundary between the District of Nipissing and the District of Timiskaming.

The survey was commenced at an iron post, marked "Riddell," on the south-west side, and "Cassels" on the north-west side. This post was found in the meridian line, run by O.L.S. Niven in 1885, which forms the east boundary of the townships of Cassels and Riddell. From this point, the line was run due east astronomically a distance of 9 miles 74 chains and 39 links to the waters of Lake Timiskaming. On the line wooden posts were planted every half-mile, and marked on the west side with the number of miles or half-miles distant from the starting place. The mile posts were also marked "Timiskaming" on the north side, and "Nipissing" on the south side. Iron posts were planted at the end of the fourth and eighth miles, and marked similarly to the wooden posts. As there was a perpendicular drop of some 100 feet at the point where outline joined the waters of Lake Timiskaming, it was impossible to plant iron posts at the high water mark as instructed by you. However, they were planted as near the face of the cliff as possible, and were well mounted with boulders. They were marked "Timiskaming" on the north side, "Nipissing" on the south side, and "IX. M & 74 chains, 23 links" on the west side.

## TIMBER.

At Mileage IV. M. & 48 chains, 47 links the line crossed the eastern limit of the Timagami Forest Reserve. To the west of this line is a virgin forest of white and red pine with a considerable amount of valuable spruce and jack pine. There is also balsam and birch in smaller quantities. East of the reserve line all the pine has been cut. There is left a dense growth of spruce averaging about 8 inches, as well as some cedar, birch, and jack pine. The timber around Macdonald Lake was destroyed by fire about three years ago.

## WATERS.

The main waters of the section are Rabbit Lake, Macdonald Lake, and the Matabitchouan River. On Rabbit Lake large storage dams have been constructed by the British Canadian Power Company. These have flooded the surrounding country, but have done very little damage, as the shores of the lake are steep and rocky. There is a convenient canoe route from Rabbit Lake to Macdonald Lake.

## PHYSICAL FEATURES.

The greater portion of the country is rocky and very rough. The surface soil is scanty. The hills surrounding Lake Timiskaming are about 400 feet in height, and drop sharply towards the lake. At the Matabitchouan River there is also a very steep hill.



## ROCKS AND MINERALS.

The rock formation is chiefly diabase and granite. Very little trace of economic mineral was found. In the vicinity of Macdonald Lake the country has been staked for mining purposes, and considerable work has been done, though at present no companies are operating.

## GAME AND FISH.

Moose and red deer are quite plentiful in this district. The smaller animals have been trapped off to a great extent. There is, however, an abundance of fish. Rabbit Lake and the smaller lakes surrounding it are well stocked with pike, bass, and pickerel.

Observations for Azimuth were taken on Polaris throughout the work, and recorded in the field notes. The Magnetic Variation found was  $9^{\circ}30'$  West.

Accompanying the report I beg to submit a plan on mounted paper, showing the topography of the line, and the waterways; a timber plan on tracing linen; a copy of the field notes, and index for same.

All of which are respectfully submitted.

I have the honour to be

Sir,

Your obedient servant,

(Signed) R. S. CODE,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ont

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*Appendix No. 19.*

## SURVEY OF TOWNSHIP OUTLINES, DISTRICTS OF ALGOMA AND SUDBURY.

OTTAWA, September 7th, 1912.

SIR,—I have the honour to submit the following report on the survey of certain township outlines in the Districts of Algoma and Sudbury, lying between the Ground Hog River and the Kapuskasing River, performed under instructions dated May 21st, 1912.

In pursuance of instructions I commenced my survey at the 18th mile post of O.L.S. T. B. Speight's base line run in 1909 near the crossing of the Canadian Northern Railway (under construction) over the Ground Hog River. From this point I ran north astronomically a distance of 9 miles, planting posts at the end of each 120 chains, excepting that as the third mile came in Gervais Lake, I planted a post on either shore with the chainage marked thereon.

From the nine mile post I ran west astronomically to intersect the meridian run north from the 9th mile post of O.L.S. Speight's base line aforesaid, which meridian I produced northward to intersect O.L.S. A. Niven's base line run in 1899 from the 120 mile post of the boundary between Nipissing and Sudbury Districts near the 61st mile post.

I then produced my before-mentioned base line west astronomically to intersection with O.L.S. Speight's meridian line run in 1909 near the 57th mile post thereof; thence west astronomically 9 miles, planting posts in accordance with instructions at the end of each  $1\frac{1}{2}$  miles, excepting that as the end of the sixth mile came in Mishiongo Lake, I planted a cedar post on the eastern shore of the west bay; thence due north to intersect O.L.S. Niven's base line near the 79th mile post thereof.

Again, commencing at the 81st mile post of O.L.S. Niven's base line aforesaid I ran north a distance of 18 miles and 78 links to intersection with O.L.S. Speight's base line run in 1909.

Finally, I ran due east astronomically from the intersection of O.L.S. Beatty's base line run this year, with the meridian mentioned in the next preceding clause near the 9th mile thereof, to intersect O.L.S. Speight's meridian line run in 1909, due north from the 72nd mile post of O.L.S. Niven's base line run in 1899.

The above mentioned lines were well cut out and the adjacent trees blazed on three sides in the customary manner, and especially well blazed where lines intersected navigable streams or lakes. Hewn wooden posts were planted as shown in the notes, and, except where available timber was too small, were six inches square when so hewn. Care was taken to plant posts as firmly as possible. Where possible a mound of stones was erected about the base of the posts. When the end of the mile and a half came in a lake or river the post was planted at the nearest shore with the chainage in miles, chains, and links carved thereon.

Iron posts were planted alongside the wooden posts (1) at the end of the first nine miles run, (2) at the intersection with the second meridian run, and (3) at the intersection of the second meridian with O.L.S. Niven's base line near the 61st mile post, (4) at the intersection of the 1st base line run with O.L.S. Speight's meridian near the 57th mile post, (5) at the end of the 9th mile west from Speight's base line, (6) at the intersection of the third meridian line with O.L.S. Niven's base line near the 79th mile post, (7) at the intersection of O.L.S. H. J. Beatty's base line with the meridian run by me north from the 81st mile of Niven's base line, near the 9th mile post, and (8) at the intersection of O.L.S. Beatty's base line produced by me, with O.L.S. Speight's meridian north from the 72nd mile post of O.L.S. Niven's base line run in 1899.

At frequent intervals throughout the survey observations on Polaris were taken for obtaining azimuth, and the magnetic declination, which varied between 5 degrees and 7 degrees west of north, was noted and entered in the field notes.

Throughout the survey the chainbearers were impressed with the importance of noting the nature of the soil where exposed, the kind and size of the timber passed through, etc., and also of the need of great care to obtain accuracy in their operations.

#### PHYSICAL FEATURES.

The district within the limits of the lines run by me is traversed diagonally by the new Sudbury-Port Arthur branch of the Canadian Northern Railway, and is for the most part rolling country, with numerous lakes, rivers, and creeks. The soil is light and gravelly in the eastern part of the district surveyed, but good agricultural clay land was met with in the western areas near the Kapuskasing River. Very little rock was met with and no evidence was seen of the presence of any economic minerals. A low hill of syenite was encountered on the first line run north from the 18 m.p. of O.L.S. Speight's base line, and again an exposure of granular quartzite was crossed west of the Piskanogama River.

### TIMBER.

Considerable black and white spruce was seen and noted, as shewn in the notes, the most valuable tract from a commercial viewpoint being east of the Kapuskasing River and several miles north of the Canadian Northern Railway.

The timber for the most part, however, is small and faulty. Some scattering red and white pine groves were crossed and several large tracts of poplar suitable for pulp-wood.

It was noticed that the tamarac trees are beginning to put out green shoots, and a good deal of young green tamarac was seen in the level swamp land.

### WATER POWER.

Nearly every stream crossed is available for power development, the most promising being the falls on the Kapuskasing, below Kapuskasing Lake, and a series of long rapids on the Piskonogama, a few miles north from the crossing of the Canadian Northern Railway. There is also a splendid chute with a fall of about 30 feet on the Kapuskasing River, just north of the crossing of O.L.S. Speight's base line.

### GAME.

Signs of moose were plentiful everywhere, but partridge and rabbit seemed scarce.

The waters and shores of some of the lakes and rivers abound with muskrat and beaver. A good many marten and fisher were seen and two red deer. Duck, geese and loon were fairly plentiful.

Accompanying this report are field notes, index plan, timber plan, general plan mounted on cotton, chain bearers oaths, account in triplicate.

I have the honour to be

Sir,

Your obedient servant,

(Signed) J. W. PIERCE.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

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### *Appendix No. 20.*

### SURVEY OF TOWNSHIP OUTLINES, DISTRICT OF SUDBURY.

SUDBURY, ONT., October 17th, 1912.

SIR,—I have the honour to report as follows on the survey of certain township outlines in the vicinity of Ground Hog Lake, along the line of the Canadian Northern Ontario Railway, in the District of Sudbury, performed under instructions from your Department, dated May 23rd, 1912.

On June 27th my packers left for Bisco. and the following morning proceeded up Bisco Lake and over the old canoe route to Flying Post. The remainder of the



party followed on July 3rd, overtaking the packers at Marion Lake, and all arrived at the O.L.S. Speight's Base Line, on the Ground Hog River, early on the morning of July 8th.

I started my survey at the 18th mile post on this base line, and ran my second meridian line south 18 miles to connect with O.L.S. Smith's survey, but Mr. Smith had not then reached that part of his work, so I blazed several chains ahead of the end of my line to enable him to find it without trouble.

From a post on O.L.S. Speight's base line on the west shore of Ground Hog River, marked 18 miles, 73.00 chains, my first base line was run 8 miles and 7.00 chains east and the north-east corner of township of Penhorwood established and the line continued east to the west boundary of Township of Pharand.

From the north-east corner of township of Penhorwood my third meridian line was run south 18 miles, and, as before, the blazing was continued beyond the end of the line to enable him to find it quickly.

My second base line was begun at the 9th mile on my third meridian and run east to the west boundary of Township of Crothers and west to intersection with my second meridian line at the 9th mile, and continued west 9 miles farther.

From this last point my first meridian line was run 9 miles north to intersection with O.L.S. Speight's base line near his 9th mile post.

The iron posts provided by your Department were planted at the various township corners according to instructions and marked with the names of the adjacent townships, so far as they were known to me, and with the mileage.

Wooden posts of cedar, spruce or pine, six inches square or larger, were similarly marked and firmly planted beside the iron ones and both securely rocked up.

Wooden posts similar to the above and properly marked with the mileage were planted at every mile and a half on each line, and the position of every post was established with reference to two bearing trees.

All lines were well cleared to a good width, and particular attention was paid to liberal blazing of the same.

The season was very wet and caused much discomfort, which was only partly counter-balanced by the complete absence of blackflies. Owing to the long continued spells of cloudy weather I was unable to take as many observations for azimuth as I wished. Those taken are shown in their proper places in the field notes, and the bearing of the line at each place noted.

The variation of the compass was found to be about  $6^{\circ}30'$  west of north.

#### GENERAL FEATURES.

The surface of the country included within the limits of this survey may be described as gently rolling, as only on the west line of Township of Hardiman and on the south line of Township of Keith were hills over thirty feet in height encountered, and none were precipitous, being for the most part sand ridges. Small lakes and small cedar swamps are very numerous. An area of old *brulé*, grown up with small poplar, spruce, and Banksian pine lies in a north and south direction across the township east of Penhorwood. The south-west corner of Township of Hardiman lies in a similar *brulé*, and the same was encountered on the south and west lines of Township of Keith.

#### SOIL.

A small area of sandy loam in the north-west corner of Township of Penhorwood is suitable for farming, but for the most part the soil, as observed on the lines,



consists of very light sand, or sand and granite boulders with a very few rocky ridges. However, there are probably many small areas of good farm land in the interiors of the townships. Mr. McLeod, Hudson's Bay Factor at Flying Post, has been very successful in raising all kinds of vegetables, potatoes especially, in large quantities.

#### TIMBER.

The timber worthy of note consists of spruce, poplar, Banksian pine, birch, cedar, and balsam of splendid growth. Except for scattered specimens, the only white pine seen was in the south-west corner of Township of Penhorwood and south-east corner of Keith, east of the Ground Hog Lake. The pine here, which covers an area of about four square miles, is neither very large nor very plentiful. Some red pine, averaging about fifteen inches in diameter, was seen on the shores of the north-east arm of Matagaming Lake.

#### ROCK.

On the west line of Township of Penhorwood greenstone schist was seen. On the south line of Township of Keith the line crossed a small ridge of porphyry, and a couple of outcroppings of quartz were noticed. The remainder of the rock seen was all granite.

#### WATER POWERS.

No water powers of commercial value are known to exist within the limits of this survey.

#### GAME.

Mink, marten, and bears were seen, the latter being very plentiful, as are moose and beaver. No signs of red deer were seen, and partridges were scarce, owing, no doubt, to the cold wet weather during the time of hatching and later. The Indians report fur-bearing animals in general to be plentiful.

Accompanying this report are the field notes, oaths of chainmen, map on scale of one mile to an inch, timber plan on linen and my account in triplicate, all of which are respectfully submitted.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) E. H. Low,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 21.*

## SURVEY OF TOWNSHIP LINES, DISTRICT OF SUDBURY.

SUDBURY, ONT., October 31st, 1912.

SIR,—I beg to submit the following report on the survey of the township outlines, in the District of Sudbury, along the line of the Canadian Northern Railway, performed under your instructions dated June 25th, 1912.

I arrived with my party at the north-west corner of the township of Togo on July 18th, and was fortunate enough to get an observation for azimuth, using the west boundary of the township of Mattagami as reference line for same. I began my first base line the following morning and continued it west to the Macaming River, after which I returned to the posts left at 6 miles and 30 chains west of the place of beginning, and ran my first meridian north between the townships of Stetham and Carter to the intersection thereof with the south boundary of the township of Hazen. I then ran south between the townships of Jack and Noble to the north bank of Minniesinaqua Lake, and returned to the base line at Macaming River and continued west to a point distant 6 miles and 6.29 chains from my first meridian. I ran the second meridian south along the west boundary of Jack from this point 6 miles. From this second meridian I continued west along the south boundary of Whalen 6 miles, and returning to the said meridian ran it north to the intersection thereof with the south boundary of the township of Middleboro produced to a point 27 links west of its south-west angle. I then ran west along my second base line between the townships of Wigle and Whalen, 6 miles, and thence south along the west boundary of Whalen to the south-west angle thereof. Returning to the north-west angle of Whalen, I produced my third meridian north along the west boundary of Wigle to a point near the intersection with my third base line. I then located the post planted at the north-west angle of the township of Middleboro by H. J. Beatty, O.L.S., and ran my third base line west to the intersection thereof with the west boundary of Wigle, continuing it west to the south-west angle of the township of Hardiman. At the intersection with the west boundary of Regan I moved the post planted by E. H. Low, O.L.S., 1.40 chains south to my line, and at the west boundary of Hardiman I moved his post 1.47 chains south to my line, and by so doing completed the above survey.

Wooden posts were planted at half-mile intervals on the different lines, together with one of the iron posts supplied by your Department at each of the township corners, all of which have been marked and referenced by bearing trees, as shown in the accompanying field notes. Where it was possible to do so cairns of stones were built around the posts, and, with the exception of that at the south-east corner of Jack, at Minniesinaqua Lake, the different township corners have been so protected.

The country generally is composed mostly of rolling sandy loam and clay with loose boulders and stony. In different places, as shown in the field notes, high rocky hills were met with, and numerous swamps and small lakes were crossed.

The timber is mostly Jack pine, spruce, birch, balsam, and poplar with underbrush. Brulé and windfall lie along the lines in different places as shown in field notes. Some white pine was seen on the following lines. *i.e.*, between Carter and Jack, II. M. to III. M. South boundary of Whalen I. M. to IV. M. West boundary of Jack I. M. to II. M. West boundary of Whalen, O. M. to IV. M. West boundary of Wigle, II M. to IV. M.

The rock is of a granite formation, except a diorite outcrop near the south-west corner of Hardiman. No minerals were discovered or mining claims found.

Moose, partridge and beaver are plentiful, and the lakes are well stocked with pike and pickerel.

Accompanying this report is a plan of survey, timber plan, field notes, and oaths of chainmen.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) WALTER SMITH,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 22.*

**SURVEY OF OUTLINES OF TOWNSHIPS WEST OF LAKE TIMAGAMI AND LADY EVELYN  
LAKE, DISTRICT OF SUDBURY.**

COBALT, ONT., *October 17th, 1912.*

SIR,—I beg to report that in accordance with instructions received from your Department and dated June 18th, 1912, I have surveyed the Third and Fourth Meridian lines, and First Base line, being north of the townships of Marconi, Turner and Seagram, and south of the townships of Corley, Gamble and McGiffin, in the Timagami Forest Reserve, in the District of Sudbury.

From a post marked "VI Miles" on the east, "Selby" on the north-east, "Dundee" on the south-west, and "Parker" on the north-west, "Acadia" on the south-east, on the line between the townships of Selby and Acadia, run by J. J. Newman, O.L.S., in 1911, I ran the Third Meridian due north astronomically 5 miles, and 74.69 chains, and intersected the south boundary of the township of Gamble at a point due west astronomically 10.85 chains from an iron and spruce post defining the south-east angle of the said township of Gamble and the south-west angle of the township of McGiffin. I then returned to the said point of commencement and ran said Third Meridian due south astronomically 6 miles and 6.50 chains, and intersected the north boundary of the township of Seagram in a lake at a point due west astronomically 29.70 chains from the post planted on the east shore of said lake, and marked V.M.—4.93. From a six-inch red pine post planted on the easterly shore of Florence Lake and marked 66 plus 43 on the east side, and which said post was planted by J. J. Newman, O.L.S., in 1911, on the line between the Townships of Parker and Dundee, I ran the first Base Line due west astronomically, intersecting the east boundary of the Township of Haentschel at a point 4.33 chains south astronomically from the north-east corner of the said Township of Haentschel.

From the end of the 6th mile on the first base line, I ran the fourth meridian north astronomically to intersect the south boundary of the Township of Corley



and south astronomically to the north boundary of the Township of Turner. The fourth meridian intersects the south boundary of Corley at a point 7.41 chains west of the south-east angle of the said Township of Corley. The fourth meridian line intersects the north boundary of Turner Township in a lake at a point 31 chains west of the second mile post on said township boundary.

Along these base and meridian lines most durable posts were planted every mile and half-mile, and where possible, a cairn of rock was piled around them. On the base line these posts were carved in Roman numerals on the east side, while the posts on meridian lines were carved on the south side. Where these lines intersected township boundaries, iron posts were planted with the names of the adjacent townships marked thereon with a cold chisel and the wooden posts were marked similarly.

#### PHYSICAL FEATURES.

The country throughout consists of high rocky successions of ridges running north and south, with a light overburden of soil, with very little agricultural land to be found. The formation of rock is principally quartzite and diabase, the quartzite being principally found around Florence Lake. A diligent search for mineral was made throughout the work, but none was found. A number of mining claims have been staked around the locality of Florence Lake, but no surveyed claims were to be found.

#### TIMBER.

The district throughout is heavily timbered, consisting chiefly of white and red pine, balsam, spruce, poplar, jackpine, and a few scattering groves of maple.

#### FISH AND GAME.

Moose, red deer and caribou are the principal species of large game, all being most plentiful. The small fur-bearing animals are the black bear, beaver, mink, marten, otter, fox and muskrat. Partridge, geese and ducks are very plentiful, and the various kinds of fish are speckled trout, pike, pickerel and bass.

Observations for azimuth were frequently taken on Polaris, and recorded in the field notes. The magnetic variations was found to be 8°30' west.

Accompanying this report I submit a general plan on the scale of one mile to the inch, a timber plan, and field notes.

All of which is respectfully submitted.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) R. S. CODE,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.



*Appendix No. 23.*

## SURVEY OF THE OUTLINES OF THE TOWNSHIP OF LOWTHER, TEMPLETON AND TALBOTT, DISTRICT OF ALGOMA.

NEW LISKEARD, ONT., October 19th, 1912.

SIR,—We have the honour to submit the following report on the survey of the outlines of the Townships of Lowther, Templeton and Talbott, in the District of Algoma, made by us under instructions from your Department dated June 26th, 1912.

Work on this survey was commenced during the last week of July. We started at the south-easterly corner of the Township of Way, which is also the south-westerly corner of the township of Kendall, both of which townships were being subdivided at the same time. From the south-easterly corner of Way we ran a meridian due south astronomically nine miles; thence west astronomically nine miles. We then brought a line south astronomically nine miles from the south-westerly corner of the Township of Way to intersect the east and west line already run by us. Those lines, with the south boundary of the Township of Way, form the boundaries of the Township of Lowther. From this intersection, which is the south-westerly angle of Lowther Township, a meridian was run south astronomically eighteen miles to intersect the base line run by O.L.S. Speight in 1910. From the same point we ran west astronomically nine miles and thence south astronomically eighteen miles to O.L.S. Speight's base line, above mentioned. From the end of the ninth mile on the most westerly meridian run by us we ran east astronomically nine miles to intersect the most easterly meridian which intersected O.L.S. Speight's base line, above mentioned. Those latter lines form the boundaries of the Townships of Templeton and Talbott, Talbott being to the south.

Good substantial squared wooden posts were planted at every mile and a half. In no place those posts came in a lake or a stream, so that no witness posts were planted. All those posts were properly marked with the mileage number from the east and south, from 1½ M to 9 M, for each township boundary. At the corners of the several townships an iron post was planted. Those iron posts, as well as the wooden posts at the same corners have marked on them the names of the Townships contiguous to the corner at which the post is planted; the names of the townships on the post facing in the direction of the respective townships.

## PHYSICAL AND GEOLOGICAL FEATURES.

The country crossed by those lines is on the whole comparatively level, although in most cases sufficiently undulating to afford good drainage at such time when the bush is cleared and ditches dug.

The only stream of any importance passing through those townships is the Mattawishqua River. Several creeks and small streams drain into this; on the whole, affording fairly good drainage. This river from where it is crossed by the Algoma Central and Hudson Bay Railway is navigable for canoes to Hearst town and to its outlet on the Missinaibi River, although it is very rough in places. During the past summer it was used as a canoe route by the contractors on the Algoma Central and Hudson Bay Railroad from Hearst to where the river crosses the Algoma Central. Although only a distance of about fifty miles by the river, it took several days to traverse it with a loaded canoe, so that as a means of transportation

it is of very little use. We are told that there are numerous rapids and falls on this river, although none of importance were seen or measured by us. In any case there will be very little chance of any power development on this stream in those townships surveyed, as the banks of this stream are quite low, and consequently, very few facilities for damming purposes. In low water the discharge of the stream is very small.

The highest ground crossed by those outlines is on the east boundary of the Township of Lowther between Mileage One and Three, and on the west boundary of the Township of Talbott, which passes through a chain of lakes between M 3 and M 6, and in no place being very rough.

At approximately 2 miles and 50 chains on the south boundary of Lowther we found outcrops of fine grained basic igneous rock, probably a diorite and rich in horn-blende. Those outcrops continue at intervals up to 3 miles and 10 chains, and occur as north-east and south-west ridges, just rising slightly above the surrounding country, which contains boulders of the same formation.

Another small outcrop parallel to the former occurs at 5 miles and 30 chains on the south boundary of Lowther. At approximately 7 miles the line again crosses an outcrop of granite rising to the south 15 or 20 feet above the surrounding country. Between M 3 and M 4, on the west boundary of Templeton, outcrops of diorite cut by a network of acidic dykes and masses of very coarsely crystallized granite, almost pegmatitic, occur. From the character of the rock and the strike of the outcrops, which is west and south-west, it would appear to be of the same series of outcrops that was crossed by the south boundary of Lowther.

Occasional other small ridges of granite were crossed.

Lakes are not very numerous, the only lakes of importance being along the west side of the Township of Talbott.

#### TIMBER.

The timber crossed in those townships was, generally speaking, very small. Very little was seen that will be of much commercial value. There are, however, in places, small strips of spruce which will make pulpwood; but very little of the timber seen by us averages more than seven or eight inches. None of the country in this section has been burned during the construction of the Algoma Central Railway. The only *brulé* seen is on the west boundary of Talbott, along Wigwam Lake, and along the west boundary of Templeton from 2 M to 3 M. In each case those *brulé* are at least five years old. The bush is almost entirely of spruce, which in places grows very thick. There are also a few ridges of poplar which runs as high as twelve inches in diameter, as well as small balsam and tamarac.

#### SOIL.

The soil seems to be entirely of a sandy nature. In places there is a considerable depth of vegetable matter, after which is the sand, with small stones and boulders mixed through it. This can be plainly seen along the construction of the Algoma Central Railway. The soil in those townships is not a good clay like that seen along the Transcontinental Railway. Along the Algoma Central Railway the soil seems to change from a clay to a sand about nine miles south of the town of Hearst. This soil, however, in time will be turned into agricultural land, although it will not be so easily worked as the clay to the north owing to the great number of stones in it.

## GAME.

Of the larger animals, the moose seems to be the only one to be seen, but the moose are very plentiful. In a few places we saw fresh beaver work, although they do not appear to be very numerous. No bears were seen although signs of small numbers of them are evident. Partridge are quite plentiful. There are also a few ducks on some of the lakes. Outside of the moose, it is not a very good game country.

Accompanying this report are also field notes and plans of survey.

We have the honour to be,

Sir,

Your obedient servants,

(Sgd.) SUTCLIFFE & NEELANDS,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 24.*

SURVEY OF TOWNSHIP OUTLINES, DISTRICT OF TIMISKAMING.

COBALT, ONT., October 3rd, 1912.

SIR,—In obedience to instructions received from your Department, dated June 21st, 1912, I have the honour to submit the following report:—

The survey was commenced at the III mile and 41 chain post on O.L.S. Fitzgerald's Base Line, run in 1908. The line was produced east astronomically from this point to intersect the east boundary of the Township of Timmins at Mileage VI. and 64 chains, 81 links, which point is 4 chains 82 links north astronomically from the south-west angle of McEvay Township.

From the VI. mile post at the end of the base line run by O.L.S. Bell, in 1911, which defines the south boundary of the Township of McEvay, the meridian was run north astronomically to intersect the south boundary of the Township of Egan, this being O.L.S. Galbraith's base line. The intersection came at a point 14 chains 63 links west of the post between lots 10 and 11, and at chainage V miles, 77 chains 6 links. An iron and a spruce post were planted here, and marked "Timmins" on the south-west, "McEvay" on the south-east.

From the VI mile post at the end of the base line run by O.L.S. Bell, in 1911, which defines the south boundary of the Township of McEvay, the meridian was run south astronomically, passing 39 links west of iron and wooden posts planted by O.L.S. Bell, and marked "Nordica" on the north-east, and "Sheba" on the south-east. O.L.S. Bell's base line was produced to intersect my line. From this intersection the meridian was produced south astronomically to intersect O.L.S. Fullerton's base line at a point 16 chains 48 links west of the north-east corner of the Township of Baden. At the intersection point an iron and a six-inch Jack pine



post were planted, being marked "Sheba" on the north-east and "Robertson" on the north-west. From this point the line was chained north to the south-east corner of the Township of Timmins.

From the south-east angle of the Township of Fasken, the south boundary of the Township of Michie was run east astronomically 6 miles, 64 chains, 84 links, intersecting the west boundary of the Township of Nordica at a point 3 chains, 6 links north of the south-west angle thereof. At this point a 10 inch Jack pine post was planted, marked on the west, VI M and 64 chains, 84 links; on the south-west, "Robertson," and on the north-west "Michie." This completed the survey.

The details of the survey will be found in the field notes. The lines were well opened out, and well blazed. All posts were well planted and marked with the various names of the townships, bearing trees being taken very carefully in every instance. The instrument work was very carefully performed, and observations for azimuth were taken frequently on Polaris, the magnetic variation of the needle being from  $8^{\circ}15'$  to  $8^{\circ}45'$  west of north.

#### PHYSICAL FEATURES.

The country, although not too good for agricultural purposes, is not very rocky, except for a portion extending about a mile east and west of Trout Lake. With the exception of the north five miles of the east boundary of the Township of Timmins, the country is fairly hilly, the hills rising from one hundred and fifty to two hundred feet above the lake levels, but with long, easy slopes. The soil is very sandy, and in the Townships of Timmins and Michie, to the west and north of Trout Lake, where the fire has run through, the soil appears to be entirely sand.

#### WATERS.

The principal waters in this district are Trout Lake and Trout Creek. Trout Lake is very clear, and in places is more than one hundred feet in depth. Trout Creek is barely navigable by canoe, and there seems to be but very little difference in elevation between the levels of Trout and Night Hawk Lakes.

Small lakes are very numerous. No waterfalls were evident and no rapids, with the exception of a very small one on Trout Creek, just north of O.L.S. Fitzgerald's base line.

#### ROCKS AND MINERALS.

The rock formation is mostly granite, with the exception of a few small patches of Keewatin and Diabase.

#### TIMBER.

With the exception of a portion to the west and north of Trout Lake, which is very old *brulé*, and is overgrown with small pine of two or three inches on the stump, the timber is Jack pine, cedar, birch, balsam, spruce and poplar, of from eight to ten inches through.

#### FISH AND GAME.

With the exception of Trout Lake, where we were successful in catching two small lake trout, the lakes are full of pike.



The country abounds with moose, but as it has been well trapped over by the Indians, there are few evidences of beaver, mink or muskrat.

Partridges were very plentiful.

Accompanying this report I beg to submit a plan on mounted paper, of the district in general, a timber plan on tracing linen, and also a copy of field notes, including astronomical observations and magnetic variations.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) T. G. CODE,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 25.*

SURVEY OF THE TOWNSHIP OF GILL, DISTRICT OF ALGOMA.

ELK LAKE, ONT., October 12th, 1912.

SIR,—Acting under instructions from your Department dated June 7th, 1912, I have completed the survey of the Township of Gill, in the District of Algoma. Herewith I am sending you copies of my field notes, together with a plan of the township on a scale of forty chains to the inch, traverse plans of the lakes and the White River and a timber map of the township.

With the exception of a comparatively small area of muskeg, on which there is only scattered small spruce and tamarac, and five or six thousand acres of burnt country in the north-west part, the township is well timbered with spruce, poplar, cedar, and white birch, and in the southeasterly part by Banksian pine. There is very little milling timber, but a large amount of valuable pulp wood.

About half the area of this township is more or less swampy. While this swampy land does not afford much encouragement for early settlement, most of it will, I believe, eventually make good farming land, as it will be comparatively easily drained, the creeks and rivers all having considerable fall and strong currents, thus affording good outlets for the water.

The land most available for present settlement is that included in the burnt country previously mentioned. This land is practically all dry and of good quality and easily cleared. Most of the timber formerly standing on it is now lying on the ground, the trees in falling having taken the roots with them. There is only a scattered second growth of hazel and other shrubs, with some spruce, poplar, birch and Banksian pine not exceeding two inches in diameter.

Generally speaking, lots one to twelve in all of the concessions south of the National Transcontinental Railway are not desirable farming land. In concessions one to three these lots are largely sand and gravel hills with granite boulders, while some are swampy and a few muskeg. From the third concession to the railway they form the most swampy part of the township. West of the side line between lots twelve and thirteen, though, there is some muskeg and not a little swamp; there is a large quantity of very desirable farming land.

The White (or Nagagamissee) River, which enters the township in lot sixteen in the first concession is, from the northerly limit of the second concession to where it leaves the township in the west boundary of concession nine, largely a succession of rapids and waterfalls, the total fall in that distance being about 120 feet. As the volume of water estimated at ordinary low water is about 48,000 cubic feet per minute there is in this river a large amount of water power. No great amount of this power could be developed as a single unit as the slope of the land generally follows that of the river, and only towards the north are there any high banks. The highest fall is fourteen feet, and probably the highest that could be obtained from a single dam about twenty-five feet. I have, as shown in red on the plan and in my field notes, reserved from the lots a liberal allowance of land for the development of larger units. In order to give access to these and to permit the development of the smaller units I have reserved, as also shown in red, one chain in width along each bank of the river from the southerly limit of concession three to the railway. At the intersection of these reservations with the concession lines I have planted posts, marking them in the same manner as posts planted for road allowances about lakes except that on the side facing the water instead of the letter "R" I have put "W."

The following iron posts were planted:

At the S. W. corner lot 12, Con. 1, a post  $1\frac{1}{4}$  inches in diam. marked Con. 1 on N. side, Lot XII on E. side, R. on W. side and R. on S. side.

At the S. W. corner of lot 12, Con. VII an iron post  $1\frac{1}{4}$  inches in diam. marked Con. VII on north side, Lot XII on east side, R. on south side and R. on west side.

At the N. W. corner of Lot 12, Con. XII an iron post  $1\frac{1}{4}$  inches in diam. marked Con. XII on south side, Lot XII on east side, R on north side and R on west side.

Trusting that this will meet with your approval,

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) A. D. GRIFFIN,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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### *Appendix No. 36.*

#### SURVEY OF THE TOWNSHIP OF KENDALL, DISTRICT OF ALGOMA.

THESSALON, ONT., August 24th, 1912.

SIR,—In accordance with your instructions dated May 28th, 1912, I have surveyed the Township of Kendall, in the District of Algoma, and beg to submit the following report:—

The survey was commenced on the 10th of June and continued without interruption until completed on the 14th of August.

6 L.M.

This township is very easily reached, as the National Transcontinental Railway crosses it from east to west, and the townsite of Hearst is in the north-west corner of the township. The north-east corner of the township was surveyed first and the line between Lots 6 and 7 across Concessions 1 to 8 was run from north to south. The field notes, however, were reversed so as to read from south to north.

Iron posts were planted at the intersections of the centres of the road allowances at the following places: At Lots 12 and 13, Concessions 1, 6, 7 and 12, at the east side of Lot 1, Concessions 6 and 7, at the west side of Lot 29, Concessions 6 and 7, at the north-west and south-west corners of the township; and at Lots 6 and 7, Concession 12 (north boundary). Iron posts had already been planted at the north-east and south-east corners of the township.

The town site of Hearst lies in the north-west corner of the township, and all the land between the Transcontinental Railway and the Mattawishquia River as far west as the west boundary of the township is included in the town site.

The line between Concessions 10 and 11 intersects the town site near the north-east corner of Town Lot No. 1 and a tie to the corner of this lot is shown in the field notes.

The posts for the corners of Lots 25 to 29, Concession 11, were planted by measuring along the Transcontinental Railway track. They were then projected to their proper position, as shown in the field notes. These positions were calculated from the information obtained from the plan of the right of way and railway yards supplied me by your Department.

The lines throughout the survey were all well cut and blazed and the posts were carefully made and firmly planted in the ground. All posts and bearing trees are marked with a scribing iron. Bearing trees were noted at all lot corners wherever a suitable tree could be found and the bearings and distances of these trees from the respective corners are all entered in the field notes.

The traverse of the Mattawishquia River was carefully made with transit and stadia. The posts for Lots 23 to 29, Concession 10, were all projected as the traverse was being made, the bearings and distances being reduced at the time so as to give the lots their correct frontage on the river. In some cases where a small corner of a lot would have been cut off by the railway or the river, it was considered advisable to leave such corners with the lot adjoining on the same side of the railway or river, as the case may be. Those parts of Lots 22, 23, and 24, Concession 10, which lie north of the railway were posted as two lots and numbered 22 A and 23 A in order to avoid confusion. All these lots are shown on the plan which accompanies this report.

In running the north boundary it was discovered by an observation that the bearing across Lots 1 to 6 was south  $89^{\circ} 39'$  west. This line is straight, and the error was made in starting. I decided not to re-run the line, but deflected the boundary north at Lots 6 and 7 and ran across Lots 7 to 12 on a course north  $89^{\circ} 39'$  west. Across Lots 13 to 29 the course of the north boundary is west astronomically. An iron post was planted where the line was deflected at the intersection of the line between Lots 6 and 7 with the north boundary.

Observations were taken where possible, a sidereal watch and proper azimuth tables being used for this purpose.

Across Lots 12 to 18, Concessions 9 and 10, the railway is used as the blind concession line. These lots are posted as double fronts, the road allowance on each side of the right of way of the railway being posted as well as the concession lines at the fronts of these lots. These lots are shown on the accompanying plan.



This township as a whole is gently rolling, there being very few elevations that could be called hills and very few rock exposures. The soil is a loose clay and clay loam. At least fifty per cent. of the township is clay land, high enough to require little or no drainage. There are some muskegs of considerable size, but these can all be drained when circumstances warrant doing so. The drainage facilities are good, as the township is well watered with a number of small creeks, some of which are fairly large. None of the muskegs appear to be very deep.

The prevailing timber is spruce, with poplar on the high ground. The spruce is of a size best suited for pulpwood and runs from 6 to 14 inches in diameter. There are very few spruce trees over 15 inches in diameter, but the quantity of spruce of the sizes mentioned is very large, and if pulp mills are ever established in the locality this timber will be of very great value. Part of the township was swept by fire a number of years ago, and is now growing up with a dense growth of small spruce and poplar. Where this fire ran the land should be easily cleared, and in most cases is high and dry. I am of the opinion that when this township is opened up it will prove to be a valuable one for agricultural purposes.

The Mattawishqua River is quite wide in places, but the volume of water flowing in the summer months is not large. There are some shallow rapids within the township, making canoe navigation rather tedious. None of these rapids would afford a water power of any value.

The magnetic variation is fairly constant at an average variation of 6° 15' west.

Rock exposures are very few. The prevailing formation is granite.

There is only one lake of any size in the township, and this was properly traversed and the notes of the traverse are included.

Game of all kinds appear to be scarce, although rabbits are very plentiful in the small second growth. Traces of fresh beaver work were seen.

Herewith are plan, timber plan, field notes and accounts in triplicate all duly attested.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) JAMES S. DOBIE,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 27.*

SURVEY OF THE TOWNSHIP OF WAY, DISTRICT OF ALGOMA.

NORTH BAY, ONT., October 25th, 1912.

SIR,—We have the honour to submit the following report upon the survey of the Township of Way, in the District of Algoma, performed under instructions from your Department, bearing the date of June 17th. The work was started on the 16th of July, and completed on the 12th day of September.

The survey was commenced at an iron post planted by O.L.S. Speight to mark the corner between the Townships of Hanlan, Way, Kendall and Casgrain. This was the north east angle of Way, and from this point the east boundary



of the township was run south astronomically a distance of nearly 9 miles, being run to the intersection with the south boundary of the Township of Kendall as laid down by O.L.S. Dobie. From this intersection the south boundary was run west 9 miles, and then the west boundary was run north astronomically as far as the south boundary of the 11th concession. From this point the line was swung a few minutes in azimuth to close in on the previously established south west angle of the Township of Kendall.

The Mattawishquia River was traversed as was also a portion of the Cuckoo Creek and two small lakes occurring within the township.

Posts were planted according to instructions on the various intersections of the lot lines with the road allowances along the Algoma Central Railway and National Transcontinental Railway right of way. All lots along the several Concession lines were also posted at their front angles. On all such posts were carved the word "Con." and the Concession number on the north or south face as the case might demand and the numbers of the adjacent lots on the east and west faces. Posts were planted on the actual transit lines to mark these offsetted posts. These guide posts were carved "R" on the north and south faces, and the numbers of the adjacent lots on the east and west faces. Bearing trees were carved and noted in relation to all posts planted save the last mentioned guide posts.

Iron posts were planted in the following positions:—

1. In the east boundary of the township in the centre of the road allowance between concessions 6 and 7 marked "R" on all sides.

2. At the south east angle of the township in the centre of the road allowance and marked "Kendall" on the north east face, "Way" on the north west face, "Lowther" on the south west face and "R" on each face.

3. In the south boundary of the township in the centre of the road allowance between lots 12 and 13 and marked "R" on each face.

4. At the south west angle of the township in the centre of the road allowance marked "R" on each face, "Way" on the north east face and "Lowther" on the south east face.

5. In the west boundary of the township in the centre of the road allowance between concessions 10 and 11, marked "R" on each face.

6. In the centre of the road allowance between lots 12 and 13 and concessions 6 and 7, marked "R" on each face.

7. The iron posts planted by O.L.S. Speight at the north east and north west angles of the township are in the centres of the road allowances about the township and were carved "Way" and "R" in the former case on the south west face and in the latter on the south east face.

Our party suffered considerably in the matter of accidents. A number of our very best men being laid up through severe cuts. Rain also materially retarded our progress and our records show somewhat over 40 actual days of rain while on the survey. Because of this, astronomical observations were of necessity rather limited in number, but such were taken at every possible opportunity.

#### GENERAL FEATURES.

The country embraced by this survey is traversed in an easterly and westerly direction by the Mattawishquia River and in a north easterly direction by the Algoma Central Railway which forms a junction with the Transcontinental Railway in the northerly part of the township. The T. C. R. runs in a north westerly

direction through a portion of this township at the north east corner. From these remarks it may be deduced that the township is easy of access for settlers. Such is quite the case and construction of the Algoma Central Railway is well under way, and steel will be laid in all probability during the coming winter. The Mattawishquia River, while in the main having a good width and a fair depth, nevertheless is broken by numerous swift, rocky rapids, hence cannot be utilized for other means of transportation than canoeing. This river permits of no water powers within the limits of the township.

The country has been entirely burned over a period of 50 or 70 years ago. Evidences of this fire were found every day throughout the entire survey. The country is very level and but few water courses were found within the limits of the township. Cuckoo Creek was surveyed for only a portion of its length and this at its junction with the Main River, in order that the road allowance might be accurately plotted as far as the first concession line, south of the junction. The remaining portion of this creek, although at times it attains a fair width could scarcely be called navigable, and hence was not traversed. On account of the country being level very much of the land is low and swampy.

#### SOIL.

The soil chiefly encountered is a very rich clay loam, and various evidences were noted along the railway lines of the abundant growth of hay, oats, potatoes, etc., of which it was capable. On the higher knolls the soil is somewhat lighter, while on the lower swampy portions the soil is covered with a deposit of black muck, but this will make equally as good land for agricultural purposes when the country is cleared and drained. Very little of the actual worthless muskeg was encountered but in the field notes there are noted a number of these areas.

#### TIMBER.

The almost sole timber of the township is spruce, and this in size runs in general from 4 in. to 8 in. Along the Mattawishquia River and Cuckoo Creek are splendid groves of spruce of a larger size, running from 10 to 18 in. in diameter. Inland from these streams no large spruce were found. Poplar of a size from 8 in to 15 in. in diameter were found on the banks of these streams and scattered throughout the township on the higher knolls. Considerable areas were covered with thickets of small spruce and balsams from 1 in to 3 in. in diameter.

#### MINERALS.

No outcroppings of rock were found during the survey but we submit to you two samples taken from a rock cut in the bottom of a clay cut on the line of the T. C. R. at Mileage 236 about.

#### GAME.

Moose are very plentiful although no red deer or caribou were seen. Bears are also very plentiful and our stores suffered more or less from their depredations. Partridge, mink and beaver are also quite plentiful.

## GENERAL REMARKS.

The proximity of this township of Hearst, the divisional point of the T.C.R. and the fact that this railway together with the A. C. R. both traverse the township makes it probable that this township will be thoroughly colonized when thrown open. The settlers in the southern portion of the township will by means of the concession roads have easy access to the A. C. R. line, while those in the northern portion of the township, by means of the side roads will have easy access to the T. C. R.

Accompanying this report are the usual returns, consisting of plans, tracing, field notes, triplicate accounts, etc., all of which are respectfully submitted.

We have the honour to be,

Sir,

Your obedient servants,

(Sgd.) MCAUSLAN AND ANDERSON.

per H. M. Anderson.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 28.*

RE-SURVEY OF PART OF THE TOWNSHIP OF MATTAWAN, DISTRICT OF NIPISSING.

OTTAWA, ONT., September 16th, 1912.

SIR,—I beg to submit the following report on the survey of part of the township of Mattawan, in the District of Nipissing, under instructions dated July 12th, 1912.

The party was outfitted at Ottawa and on the first day of August, 1912, left for Mattawa.

After questioning all the settlers in the district to be surveyed, it was found that the nearest post to the work that was known to any of them was that between Lots 33 and 34, on the north side of the road allowance between Concessions 7 and 8.

There the survey was commenced and by running a line on the approximate bearing, always looking for evidence of the true line and when such evidence was found these points were joined up by straight lines. In this manner the following intersections were obtained, viz.:

Lots 10 and 11, Concessions 7 and 8,

Lots 15 and 16, Concessions 7 and 8.

Lots 20 and 21, Concessions 7 and 8,

Lots 10 and 11, Concessions 9 and 10.

Lots 15 and 16, Concessions 9 and 10 and

Lots 20 and 21, Concessions 9 and 10.

Posts were planted at these intersections, the chainage between them carefully ascertained, and other posts were planted to mark the lot corners by proportioning the chainage according to that given in the original field notes.



Owing to the fact that lumbermen have been operating in this country for a great many years and also owing to the fires which have overrun this territory, evidence of the original lines has, in places, been completely obliterated.

A traverse was made along the concession lines across lots 11 to 20, and also on the road allowances between lots 15 and 16 and between lots 20 and 21. No traverse was made of the road allowance between 10 and 11, as the true line was not cut out all the way.

I enclose plans in duplicate, field notes and also accounts in triplicate.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) FRANK E. PATTERSON,  
Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines.  
Toronto, Ont.

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*Appendix No. 29.*

SURVEY OF THE TOWNSHIP OF NANSEN, DISTRICT OF TIMISKAMING.

GANANOQUE, ONT., October 1st, 1912.

SIR,—I wish to report that following instructions from you bearing date May 29th, 1912, that I have completed the survey of the north eight concessions of the said township in all 34,907/7 acres, and am submitting for your approval and inspection the field notes and plans of the same, and that during the course of my survey I have inspected closely the soil and have come to the following conclusions:

RE SOIL.

The greater portion of the tract is a muskeg moss, and vegetation matter partially decayed over a clay subsoil.

There is, however, a strip of country along the spur of the Transcontinental Railway constructed by Messrs. Fauquier that is a gravelly and sandy loam.

Messrs. Fauquier have taken gravel from pits 4, 5 and 6 respectively L. O. 465 L. O. 489 and H.S. 2,000 the gravel from pit 4 L.O. 465 that was in sight in the cut is of such quality that I do not believe that the persons in charge will use any more from this pit.

Pit 5 L.O. 489 is exhausted.

Pit 6 H. Sight 2,000 carries, I understand, the best gravel to be had in this section of the country, and is supplying Fauquier's construction needs at several points at present.

Further, that I have inspected the timber growth and have the following summary:



## TIMBER.

There is a portion of this tract approximately 9,000 acres of brulé or burned over tract. On this are dry trees and windfalls to 8 inches in bottom. This timber I consider of no value, but over the greater portion of this brulé it would be very light clearing for settlers and the fire has left the soil in good condition.

The balance of area covered by me of approximately 25,000 acres is a spruce growth varying to an 8 and 10-inch bottom, the average about 6 inches, there are a few patches of cottonwoods, birch and balsam, but nothing to speak of.

I do not consider the timber on this tract in any way valuable as a lumbering proposition, but I think the same should have considerable value for pulp purposes.

## ROCK.

There are only a few ridges of rock all of which I have shown on the plans, this is a granite formation.

I spent time on the croppings and failed to find any leads of valuable mineral.

Gravel is mentioned under soil.

## DRAINAGE.

The various creeks flowing to the lakes and Ground Hog River, will on improvement give good outlet and can be improved at comparative small cost with proper outlay of improvement work.

I consider this tract a good extent of country and might suggest a consideration for this district in line with the improvement work that is being now carried out in North Ontario, the spur of the Transcontinental Railway gives access, the burned over tract should find favor with settlers as their holdings could be much more easily improved.

Iron bars were planted at intersections of lines actually run at fronts of Concessions 5, 7 and 12 between lots 12 and 13 the same being marked by cold chisel on east and west with lot numbers and on north and south with "Con." and number of the concession found.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) H. O. DEMPSTER,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines.  
Toronto, Ont.

*Appendix No. 30.*

## ALGONQUIN NATIONAL PARK OF ONTARIO.

ALGONQUIN PARK, 31st December, 1912.

HONOURABLE SIR,—I beg to hand you my fifteenth annual report on Algonquin Park, of which I have the honour of being Superintendent, and trust it will meet with your approval.

Our staff for the past year has consisted of twenty-six men, a housekeeper and superintendent. During the trapping season—from the first of September to the first of June—the time of the staff is taken up patrolling the sections over which they have charge, to prevent illegal trapping and other breaches of the Park laws. Our men travel in pairs. The area of each section is governed by the water stretches and the ease with which it can be covered; some men cover more ground than others, owing to the fact that a great part of it is accessible by water. I feel that the staff have done good work. Illegal trapping is certainly on the decrease. We had only two cases during the past year; in each the offender was fined \$50.00 and costs, the fine being paid in both cases.

Our men also took out a quantity of fur during the trapping season, it having become so abundant that a large quantity can now be taken annually.

During the remainder of the year the time of the men is taken up in building new shelter houses, cutting portages, cleaning out streams, making improvements at headquarters, etc. We have built three new shelter houses during the past year, one on South River, one on Long Lake, and one on Tim's Lake. These are all substantial buildings. Some of the old shelters have been repaired, and at headquarters the boat house has been rebuilt. An acetylene gas plant has also been installed with a capacity of 50 lights. The slash along the Madawaska River has been cleaned up, adding very much to the appearance of the river, and also to the safety from fire.

Our men at all times act as fire rangers, and their duties as such take precedence over everything else. By acting in conjunction with the regular fire rangers a good work has been done, and I am glad to inform you the year has passed without any serious damage being done by fire in the Park. We have hundreds of canoeists on our lakes and rivers during the summer and fall, but very few fires are traceable to them. We find most of our fires originate either from the railway or lightning, generally the former.

The Canadian Northern Railway Company has been at work on construction ever since last January through the townships of Deacon, Boyd, and Pentland. Some hundreds of men are employed, and the work has been pushed ahead rapidly. I am glad to report very little trouble with fires, and less with their men breaking the law. Four special men were put on to act as fire rangers; these with the help of our regular men have kept a close supervision over the work, and I feel I have done well. This railway, skirting as it does all our best lakes and rivers, will become a very popular tourist route, and will necessitate more men on that section. Game of all kinds has very much increased in the Park and the surrounding sections. Last spring 480 beaver, 12 otter, 11 marten, 5 fisher, 71 musk rats, 8 ermine and 89 mink skins were sold, also several beaver and otter for mounting specimens. In addition 21 live beaver were sold at \$50.00 a pair f.o.b here. Of these two went to Kentucky, two to Philadelphia, nine to New York, two to

Unionville, Ont., two to England and four to Prince Edward Island. We also sold four young foxes. The amount realized by the Department at Toronto from sale of furs and live animals was \$5,959.05. I have on hand at present 14 beaver, 130 mink, 19 marten, 7 fisher, 5 raccoon, 32 musk rat, 6 otter and 14 ermine skins, and I hope to have the best showing of furs at the coming spring sale yet offered.

Wolves, I regret to say, are still very numerous and have already begun their winter's work of destruction. I estimate we killed over one hundred of these brutes during the past year, and nine have been brought in this winter already. Our men are doing their utmost to rid the Park of these pests. There is no doubt a great many come in from Quebec during the winter, as there is such an abundance of food to be found in the Park.

Fishing during the past year has been good. Some fine specimens of the true salmon introduced here three years ago have been taken. One sent to Professor Prince of the Fisheries Department, Ottawa, measured 18 inches, and was pronounced by him to be the best specimen they had received from any point where these gamest of fish have been introduced. The Government last summer put a quantity of salmon trout fry and small-mouthed bass into the lakes near headquarters. We have here a splendid location for a good hatchery, and I should like very much to see one established. We could not only keep our own stream stocked, but could supply the rest of the Province as well. The first grand prize for salmon trout in the two thousand dollar contest organized by Field and Stream was awarded a Mr. G. W. Collier of Bordentown, N. J., for a salmon trout caught in Lake of Two Rivers, Algonquin Park. It measured 30½ inches.

As a health resort and pleasure ground, the Park is now very popular; so much so that the Grand Trunk people have doubled the capacity of the Highland Inn and are building a series of camps at Smoke Lake and other points in the Park, consisting of six cottages, a guide's house and eating house, with other necessary buildings, with a view of making round trips from the hotel here without taking tents, etc.; this at an approximate cost of \$70,000.00.

Not only is the Park popular as a summer resort, but is fast becoming a winter resort also. People who visit it once in winter wish to come back; there are at the Inn now over sixty guests and this will keep up all winter. The hotel at Joe Lake is also well patronized during the summer months, but closed in winter. We have three large camps of schools, Miss Case on Cache Lake with her school of fifty girls; the Bordentown Military School at Lake of Two Rivers, and the Long Trail Camp for boys on Joe Lake. The Y.M.C.A. also of Buffalo send in a camp of young men each year.

The amount collected here during the past year for licenses was \$1,146, for rents, \$285.00, fines, \$100.00; this does not include moneys paid direct to the Department.

#### CAPERCAIZIE.

These birds introduced from Norway some years ago are not making the showing I had hoped. Several were seen during the past year, but from reliable information I believe many went north of the Canadian Pacific Railway. In time they may become numerous. They evidently seek the dense pine woods.

Lumbering is still going on to a considerable extent in the Park, but the firms of Brennen & Sons, A. Barnet & Co., J. D. Shier, Mickle, Dymont & Co.,



and the Huntsville Lumber Co., have cut out their limits, and I would strongly recommend all this territory being taken over by the Government. It would include the townships of McCraney, Hunter, McLaughlin, Finlayson and Peck. The firm of Brennen & Sons have moved their mill from Rainy Lake in the Park to the village of Kearney, which leaves only the mill of A. Barnet & Co., in the Park. It did not run last year, all the timber that would come to it of all kinds being cut.

#### RE LEASES.

Several were granted during the past year on Cache and Canoe Lakes, and there are several other applications, I would respectfully recommend that no leases be granted for some time to come except upon the lakes near headquarters. It is certain that with the Canadian Northern going through the north end of the Park there will be applications coming in from parties wishing to locate in that section. I think it should, however, be kept as near in a state of nature as possible, and be left as one spot in the province where all men can enjoy the same privileges. This northern section is a paradise for the canoeist and angler that cannot be equalled in America.

#### GOVERNMENT LIMITS IN THE PARK.

We have now good shelter houses all through the newly acquired territory, and the game has already perceptibly increased. Four fire rangers were put on this year, two being located at Great Opeongo Lake and two at Lake of Two Rivers, these with the co-operation of the regular staff were able to control all fires started, excepting one at Rock Lake, where a few men had to be hired. I am pleased to say no damage was done this year to the standing timber.

I have the honour to be,

Your obedient servant,

G. W. BARTLETT,

Park Superintendent.

The Honourable, W. H. Hearst,  
Minister of Lands, Forests and Mines.  
Toronto, Ont.

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*Appendix No. 31.*

## RONDEAU PROVINCIAL PARK.

MORPETH, 4th January, 1913.

SIR,—I have the honour to submit this my report as caretaker and ranger of the Rondeau Provincial Park for the year 1912.

This has been a wet, cold and backward season, consequently the picnic season was shorter than usual. In the spring when the ice in the Eau broke up, a high wind was blowing which caused the ice to damage the Park dock, knocking it considerably out of shape. I had it levelled up again, and put it into good condition at a cost of \$21.00, and to prevent a repetition of this trouble next spring I am now having the corners of the outer-end crib bound with thin boiler plate steel 4 ft. x 4 ft. x  $\frac{1}{8}$  in. thick.

The floor and posts in the old open pavilion were showing considerable decay in places, and according to instructions from the Department the building has been partially overhauled, painted, and put into fair condition again, at a cost of \$186.00—painting \$140.00, repairing \$46.00. This pavilion was built sixteen years ago and has been painted and repaired from time to time; but as the unpainted floor, posts, etc., have been exposed to the rains and change of weather all this time, they, as well as the under supports of the building, are not in a condition that would warrant a large expenditure in repairs. It should be replaced by a new pavilion in a few years.

The new drive road through the Park forest is nearing completion, but is costing more than we at first anticipated. Taking the stumps out of the ground and getting them off the roadway was a slow, laborious task under the system of grubbing around them and hauling out and off with rope and tackle. But when we adopted the use of stumping powder and engaged the services of an expert blaster, this part of the work went on more rapidly and satisfactorily. The blasting not only jarred the stumps and caused the soil to leave the roots, but shattered them into pieces so a team could handle them quite easily, and they could be piled in heaps to be burned later. Many of the smaller stumps landed several rods away in the bush, and did not require handling again. The soil being a light sand made it necessary to use more than double the quantity of stumping powder than would be needed in clay or gravel. However, we have the stumps all out, the holes filled in, and most of the hollows or low places in the road bed filled in. This was a tedious part of the work on account of having to get the soil for filling from among the roots or wherever it could be got at. The road is now completed for a distance of about one mile from the picnic ground, that is the driveway is levelled and graded to a width of 16 feet. When the frost goes out of the ground enough to resume levelling, the work will be continued until completed. I might say that the mosquitoes and flies became so troublesome we were compelled to stop work on the road on June 25th, and did not begin again till October 15th. These pests were worse than usual this year. Had it not been for this delay the new road would have been completed early in the fall of this year. However, we will have it in good shape for the season of 1913. The total cost to date is about \$2,641.00. The present high price of labor makes this job cost fully one-third more than it would have ten or twelve years ago. The above prices does not include the gravelling of that portion of the road leading through the picnic grounds.

The old road leading into the Park had not been gravelled for three years, and as it needed it badly in places I had it gravelled from the townline up to the pavilion, then continued with a much heavier coat up through the picnic ground on the new road. The total cost of gravelling was \$635.20.

The sawlogs that were cut out of the trees that stood on the new roadway and sold have not been taken away from the Park yet. The firewood we cut out of the tops of these trees will furnish the Park Ranger with fuel for two years, besides supplying the cottagers who camp on the Park with fuel at \$2.25 per cord. I have sold over \$70.00 worth to them this season, and forwarded the amount to the Department.

The red deer on this Park have been breeding for about ten years and increased until they numbered up into the hundreds. They became so numerous that they have browsed and destroyed a large number of the young pine, cedar and seedlings of other kinds of trees on the Park, and also on properties adjoining. They have been seen pasturing on farms nearby, 15 to 25 in a herd. Complaints from the farmers and destruction of the young growth here caused the Department to arrange to reduce the number. Consequently two expert deer hunters were sent, and during the deer season succeeded in killing about 90. Besides selling about \$800 worth of venison, the Department gave a carcass to each person who had sustained loss. As there are still quite a number of deer left, it will probably be necessary to repeat this action in another year or two.

Muskrats have been giving trouble along the sand approach to the dock, by cutting holes through behind the sheet piling into the sand, allowing the water to wash out large holes. We dug a trench along the low dock, put in plank and filled behind with marsh grass to keep the sand from washing out, but that only lasts a short time. We put in the grass twice this season and there are several fresh washouts already. To make a permanent job, a trench should be dug when the water is low in the spring, between the sand and the dock, as deep as the water will allow, and put in a cement wall. A wall 6 inches thick along the low dock would be sufficient. At the end of the high dock it should be 10 inches thick. This, I think, would prevent the rats doing further damage to the dock.

A few weeks ago some person fired the marsh grass at the farther end of the Park. During the night, while we were asleep, a high wind drove the fire to this end, and it narrowly missed burning the whole row of summer cottages. We were awakened by the light of the burning leaves, grass and old buildings across the picnic grounds, about six o'clock in the morning. We just got there in time to put out the fire in one building and save two others. When the fire was well under control we found that it had burned three unsightly old boat houses, an old shack formerly used as a summer cottage, and a small stable. None of these structures were of much value, but there were several boats and a large number of decoy ducks burned in them.

If the coming season is favorable for picnics and summer resorters, it is the general impression among the people here that, with the completion of the new road and a few other improvements that will be made in the spring, the season of 1913 will be the best in the history of the Park; so many are anticipating the pleasure of driving through the natural forest on the new road. There have been as many as 75 automobiles here in a day this season, and often from 30 to 40.

The wild geese in the enclosure have done well this season, but the wild turkeys have not given satisfactory results at all. After the two hens had been setting about a week something disturbed them and they left the nest. In a few

days they made new nests, laid again and set. They hatched 13 chicks. At the present time the gobbler, two hens and one young hen remain. We gave them their liberty from the beginning of the season, and some days they would go over two miles up into the forest. So far as we know they have had a first-class chance to do well, but it seems their enemies have been too many for them. The four that are left seem strong and hardy birds; and I think perhaps we should give them another trial next season.

Mr. F. D. Weir, the lessee of the refectory and also the boat livery, has had a poor season, the cold, backward weather being much against his business. Bathing was not so popular on account of so much cool weather. We look for a better and brighter season in 1913.

I have the honour to be, Sir,

Your obedient servant,

ISAAC GARDINER,

*Ranger.*

The Honorable W. H. Hearst,  
Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 32.*

SUPPLEMENTARY LIST OF LICENSED CULLERS 1912.

(For complete list see Minister's Report, 1911.)

Brown, R. A.....	Cartier
Brouse, Silas.....	Webbwood
Byrne, James.....	Kenora
Clearihue, Geo. A.....	784 St. Hubert St., Montreal, Que.
Cuddihey, J. T.....	Pembroke
Fraser, Darlington.....	Pembroke
Faulkner, Wm.....	Dryden
Hartt, I. B.....	Orillia
Harkins, J. J.....	Keewatin.
Jones, Wellard.....	Ignace
Kennedy, Frederick J.....	Buckingham, Que.
Macdermid, Harry.....	Sellwood Junction
Morel, H. (Jr.).....	Mattawa
Molyneaux, Harold.....	Parry Sound
Marchildon, J. P.....	Sturgeon Falls
Main, G. C.....	Fort Frances
McIntosh, Herbert.....	Biscotasing
Norgate, Chas.....	Dryden



Schultz, Albert .....	Pembroke
Spavin, John.....	Wesmeath
Spence, Dalton.....	Parry Sound
Whalen, Joseph.....	Pembroke

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*Appendix No. 33.*

THE ABITIBI PULP LIMIT AGREEMENT.

THIS AGREEMENT made in duplicate this twentieth day of August, one thousand nine hundred and twelve;

BETWEEN:

HIS MAJESTY, represented by The Honourable The Minister of Lands, Forests and Mines for the Province of Ontario, Hereinafter called "The Government"

*of the First Part,*

and

SHIRLEY OGILVIE and FRANK HARRIS ANSON, both of the City of Montreal in the Province of Quebec, Capitalists, Hereinafter called the "Grantees"

*of the Second Part.*

WHEREAS by advertisement duly published The Honourable The Minister of Lands, Forests and Mines for Ontario called for tenders to be received by him up to and including the 15th day of August, 1912, for the right to cut pulpwood on a certain area, situated on the Abitibi Lakes and River tributary to the Grand Trunk Pacific Railway and The Temiskaming and Northern Ontario Railway, hereinafter more particularly described;

AND WHEREAS on the said 15th day of August, 1912, the said The Honourable The Minister of Lands, Forests and Mines received from the Grantees a tender for the right to cut pulpwood on the said area which said tender was on the day of the date hereof approved and accepted by His Honour the Lieutenant-Governor-in-Council;

AND WHEREAS the Grant of the right to cut pulpwood upon said area was by said advertisement for tenders and by the tender of said Grantees to be upon certain terms and subject to certain conditions and stipulations;

AND WHEREAS this agreement is entered into for the purpose of ensuring the performance by the Grantees of their obligations as hereinafter defined, and of securing to the Grantees a continuous supply of wood, adequate water power privileges and lands, for the purpose of the business to be established, maintained, conducted and carried on at Iroquois and Couchiching Falls in the said area upon the terms and subject to the conditions and stipulations hereinafter contained;



NOW THEREFORE THIS INDENTURE WITNESSETH and it is agreed by and between the Grantees and the Government as follows, that is to say:

1. The Grantees shall with all convenient despatch proceed to the construction of a pulp mill or pulp mills at or near Iroquois Falls within the limits of the territory hereinafter described and will thoroughly equip the same so that the expenditure in the construction and equipment of the said pulp mill and of such other buildings and constructions as are necessary to the undertaking will be at least five hundred thousand dollars (\$500,000.00) and will operate the same so that the daily output of the said mill or mills shall not be less than one hundred tons of pulp, and so that at least two hundred and fifty hands on an average shall be kept employed in connection therewith for at least ten months of each and every year;

2. Of the said sum of five hundred thousand dollars not less than one hundred thousand dollars (\$100,000.00) shall be expended within one year from the date hereof and not less than two hundred thousand dollars (\$200,000.00) within two years from the date hereof, and the balance within three years from the date hereof;

3. The Grantees shall within such time and at such place within said territory as the Lieutenant-Governor-in-Council shall direct, erect a paper mill of the capacity of at least one hundred tons of paper per day, and shall after the erection thereof operate the same continuously so that the daily output shall not be less than seventy-five tons of paper per day;

4. The Grantees shall pay to His Majesty, His heirs and successors in advance at the Treasury Department, Toronto, yearly and every year during the period hereinafter mentioned for the cutting and removal of wood the sum of five thousand dollars (\$5,000.00) of which payments of five thousand dollars each, the first five, amounting to the sum of twenty-five thousand dollars, have been paid in advance by the Grantees, and the receipt of which is hereby acknowledged;

5. The Grantees shall during and after the year 1913 advance for the purpose of being expended or shall expend as and when The Honourable The Minister of Lands, Forests and Mines may determine, sums of money up to a total of fifty thousand dollars in clearing, erecting buildings and preparing for settlement lands selected by the Minister in the neighborhood of Iroquois Falls, such lands to remain the property of His Majesty and to be disposed of at such prices and upon such terms as the said Minister may determine, subject to a lien, as against purchasers of said lands, in favour of the Grantees for the amounts advanced or expended by the Grantees and interest thereon, the same to be repaid to the Grantees at such times and in such manner as the said Minister may determine;

6. The Grantees shall assist and co-operate with the Government in promoting settlement upon the lands of His Majesty in the said District by buying the wood and agricultural products of and giving preference in the matter of employment to bona fide settlers upon said lands;

7. The Grantees shall forthwith proceed to incorporate and organize a Joint Stock Company under the provisions of the Ontario Companies Act, with a subscribed capital of at least One million five hundred thousand dollars (\$1,500,000.00) for the purpose of developing water powers, erecting mills and carrying on the business of manufacturing pulp and paper in said territory;

8. In consideration of the said expenditure and of the contracts and engagements entered into on the part of the Grantees, the Government will and doth for the rates and prices hereinafter set forth and provided, and subject to such

reasonable terms, conditions and regulations as to the locality and the manner of cutting, measuring, removing, and driving the same as may from time to time be imposed by the Lieutenant-Governor-in-Council and subject also as is hereinafter set forth and contained; grant to the Grantees the right to cut and remove, spruce, balsam, banksian or jack pine, poplar and whitewood trees, seven inches and upwards in diameter, two feet from the ground, sufficient to supply the mill or mills to be erected for a period of twenty-one years from unoccupied, unsold and unlocated lands of the Crown as follows: being composed of land situate near the upper and lower Abitibi Lakes and along the Abitibi River, and its tributaries in the District of Temiskaming, containing by admeasurement fifteen hundred and sixty square miles, more or less, the outlines of which are more particularly described as follows, that is to say: Commencing at the north-west angle of the Township of Stimson, sixteen miles east of the Town of Cochrane at the junction of the Temiskaming and Northern Ontario Railway with the Grand Trunk Pacific Railway; thence east astronomically fifty-four miles, more or less, to the interprovincial boundary line between Ontario and Quebec; thence south astronomically along said boundary line forty-two miles; thence west astronomically twenty-three and one-half miles, more or less to the south-east angle of the Township of Michaud; thence continuing west astronomically along the south boundary of said Township six miles to the south-west angle; thence north astronomically along the west boundary of the said last-mentioned Township six miles, to the south-east angle of the Township of Munro; thence west astronomically along the south boundary of said Township of Munro six miles to the south-west angle thereof; thence north astronomically along the west boundary thereof six miles to the south-east angle of the Township of Coulson; thence west astronomically along the south boundary of the said Township of Coulson, and along the south boundary of the Township of Wilkie, twelve and a half miles more or less to the south-west angle of the latter; thence north astronomically along the west boundary of the said Township of Wilkie six miles, to the south-east angle of the Township of Teefy; thence west astronomically along the south boundary of said Township six miles to the south-west angle thereof; thence north astronomically along the west boundary of the Townships of Teefy, Edwards, Mortimer and Stimson, twenty-four miles, to the place of beginning;

EXCEPTING AND RESERVING nevertheless from the above described area the Townships of Warden and Milligan, the Abitibi Indian Reserve, the land covered by the waters of Upper and Lower Abitibi Lakes, and all islands therein, the right of way of the Grand Trunk Pacific Railway, including station grounds, all townsites, all lands heretofore patented, leased, located or applied for, in respect of which such proceedings have been taken, or shall hereafter be taken, as in the opinion of the Minister of Lands, Forests and Mines entitles the applicant or applicants to a lease or Patent for such lands;

9. The Grantees shall pay forty cents per cord for spruce, and twenty cents per cord for the other woods above mentioned, or such other prices as may from time to time be fixed by the Lieutenant-Governor-in-Council for such wood, but in no case shall the price so to be fixed be at higher figures than the price at which the general public shall be permitted to cut on other portions of the Crown domain or than others similarly situated, shall be permitted to cut;

10. The Grantees further covenant, promise and agree with the Government that they will from year to year put on such a force of firerangers as the Government shall consider necessary to protect the lands aforesaid from fire, and will

pay one-half the cost and expense of such fire ranging, the other half of such cost and expense to be borne by the Government;

11. No wood shall be cut under this agreement until after the sum of one hundred thousand dollars shall have been expended on the erection of said pulp mill and equipment thereof;

12. The Crown may revoke the right, license or permit to cut, and forfeit any bonus paid whenever the Grantees shall fail to comply with the terms of this agreement;

13. It is distinctly understood and agreed that only the right to cut wood as aforesaid is sold to the Grantees and not the soil or any part thereof, nor is any interest in the soil so sold, except in so far as may be necessary, to cut and remove the woods as aforesaid, and the wood when so cut shall (subject to the payment of the price thereof) become the absolute property of the Grantees;

14. The Government shall retain the right to sell, lease, locate or otherwise dispose of any lands included in the territory on the same terms and conditions for settlement, mining or other purposes as ordinary Crown Lands situated elsewhere, and this agreement is not to impede or retard settlement or mining operations, and nothing herein contained shall limit or affect the right of the Department of Lands, Forests and Mines to sell, locate, lease or otherwise dispose of lands in the aforesaid territory for settlement, mining or other purposes, but the same shall be as free for such disposal as if this agreement had not been made; and where any lands are so sold, located, leased or otherwise disposed of the rights of purchasers, locatees, lessees or other parties entitled to the said lands in and to the timber thereon shall be the same as if this agreement had not been made;

15. Nothing herein contained or to be done hereunder or by virtue hereof shall entitle the Grantees to a monopoly in the use of any river, streams or lakes, or tributaries thereof in the said territory, but the same shall be and continue open for the use of the public in accordance with the law in that behalf. But in view of the character of the industry to be established, the investment of so large an amount of capital and the probable enlargement of the industry in the near future, it is understood that the Government will not grant, sell or confer upon any other person or persons, corporation or corporations the right to cut pulpwood within the territory hereinbefore referred to for the purpose of export before being manufactured into pulp, or the right to cut pulpwood within or upon the said territory, the granting of which rights would, in the opinion of the Minister of Lands, Forests and Mines for the time being, have the effect of so far lessening or diminishing the supply of pulpwood in the said territory during the period covered by this agreement, and which under this agreement will be available for the making of pulp by the Grantees, as to prejudicially interfere with the Grantees during that period in obtaining all the pulpwood necessary for supplying the said mills and any extensions thereof that may be made in the meantime of extensions which may be under construction and bona fide in process of completion.

16. It is distinctly understood and agreed that nothing herein contained shall, without the consent in writing of the Minister of Lands, Forests and Mines for Ontario, be deemed to confer any right to cut or remove timber from any territory or areas already under license from the Crown, or which may hereafter be placed under license for the cutting of white and red pine timber, nor shall any cutting take place under this agreement in or in the immediate proximity of territory covered by green merchantable white or red pine available for lumbering purposes or which may be considered by the Government to be pine bearing



lands. If, however, the wood in the other part of the available territory has been exhausted or is insufficient for the requirements of the Grantees' Mills, the Grantees may cut in the vicinity of such pine bearing lands upon such terms and conditions as may from time to time be agreed upon between the Government and the Grantees, or, if they cannot come to an agreement, upon such terms, conditions and regulations as may from time to time be imposed by the Lieutenant-Governor-in-Council or by the Minister of Lands, Forests and Mines, for the purpose of affording ample protection to the standing pine, PROVIDED, HOWEVER, and it is understood and agreed, that the Grantees shall not be entitled to cut wood of any kind on said territory or on any part thereof for the purposes of export in the wood nor for sale to other persons for export in the wood;

17. IT IS HEREBY AGREED that nothing in this agreement contained shall prevent the Government from selling the right to any person or persons to cut white and red pine trees on any part of the territory hereinbefore mentioned, which has not already been placed under license, and to grant timber license in respect thereof under the Statutes and regulations in that behalf, and in no case shall the Grantees be entitled to cut the pine trees other than banksian pine unless under special permit or license from the Government or the Minister of Lands, Forests and Mines. But in the case of the sale of the right to cut white and red pine trees as in this clause hereinbefore mentioned, the sale of the right to cut shall be confined to the white and red pine trees only, and to such other timber as may be necessary to cut and remove the same;

18. NOTHING HEREIN CONTAINED shall require the Government to provide any particular quantity of wood, as the Government in no case guarantees quantities or does anything more than grant the right to cut such wood as aforesaid within the aforesaid limits, and nothing herein contained shall require the Grantees to purchase any particular quantity of wood, or to pay for any wood not actually cut upon the said territory, but it is clearly understood and agreed that so long as the supply of wood upon the said territory is sufficient to supply the mills of the Grantees herein referred to, the Grantees will take their supply of wood therefrom; except such as may be purchased by the Grantees from bona fide settlers in the District;

(a) IT IS ALSO HEREBY DECLARED that the intention of these presents is that the Grantees shall at all times during the term of twenty-one years from the date of commencement of cutting obtain a sufficient supply for their pulp and paper mills, so far as the same can be found available within the limits hereinbefore described, and so far as the same can be obtained consistently with the terms of this agreement;

19. If the Grantees shall not within three years from the date hereof expend at least the sum of five hundred thousand dollars (\$500,000.00) in erecting the said pulp mill and other necessary buildings and constructions as aforesaid, and in the constructions and equipment thereof, and in preparing for the operation of the same, and for getting out the wood for the supply of the said mill, this agreement shall become null and void; and of no effect in so far as the whole territory is concerned;

20. Settlement shall be made with the Government at the close of each season of navigation for the price of the wood cut up to that time, and a correct account of all wood cut by the Grantees shall be kept in the Books of the Grantees in such manner as the regulations made, or to be made, shall provide, and to which the officers of the Crown shall at all times be entitled to access, and returns shall from



time to time be made under oath by the Grantees to the Crown of the quantities cut as the Crown or as regulations as aforesaid may require;

21. IN THE EVENT OF THE FAILURE on the part of the Grantees to erect the said pulp and paper mills and expend the moneys thereon hereinbefore stated, or in default of the said Grantees keeping the said pulp and paper mills running after the erection thereof, and keeping the required number of men employed as aforesaid, the Government may refuse to permit the continuance of the cutting of the said wood;

22. THE GRANTEEES COVENANT with His Majesty that they shall and will not at any time or in any place deposit, empty, run or turn into or permit to be placed, deposited, emptied, run or turned into any river, stream or other waters whatsoever, refuse, sawdust, chemicals or matter of any other kind which will have the effect of destroying, harming, or driving away the fish in such river, stream or water;

23. THE LESSEES SHALL BE ENTITLED to a lease upon the usual terms of the water powers of Iroquois and Couchiching Falls, with the right to hold and control the waters of the Abitibi Lakes for power purposes to such an extent and in such manner and subject to such conditions and stipulations as the Minister of Lands, Forests and Mines may deem expedient. All plans and specifications of works for the storage and regulation of said waters must be approved of by the said Minister, and the Crown reserves the right to erect dams and maintain works for the storage of water for power purposes upon said lands, and to regulate and control same and to charge the lessees or owners of the powers benefited thereby a fair and equitable sum for the benefits conferred by such dams and works. Said lease shall contain a provision for the development of said powers to the full extent thereby required according to plans and specifications approved of by the Hydro-Electric Power Commission, and said lease shall contain a further provision that the Temiskaming and Northern Ontario Railway Commission shall be entitled, should they so desire, to delivery of all the power that can be developed over and above the amount required for the operation of said mills to the extent of ten thousand horse power at such prices and upon such terms and conditions as the said Hydro-Electric Power Commission shall fix. SAVE AS AFORESAID, all water powers and privileges on said territory, and the right of the Crown to raise, hold, lower and maintain the waters in the Abitibi Lakes at such height and in such condition, as may be found necessary or expedient for the development of the same, are reserved to the Crown;

24. The Lessees shall also be entitled to a grant upon such terms and conditions as may be imposed or determined by the Minister of Lands, Forests and Mines, of such Crown lands in the neighborhood or vicinity of Iroquois and Couchiching Falls as may be necessary or expedient for the purpose of or connected with the business to be established, maintained, conducted and carried on at Iroquois and Couchiching Falls in the said area;

25. This agreement shall be binding upon and enure to the benefit of the Grantees, their heirs, executors, administrators and assigns;

IN WITNESS WHEREOF the said Minister of Lands, Forests and Mines for the Province of Ontario, and the parties of the second part have hereunto set their hands and seals;

Signed, sealed and delivered in the presence of	}	(Signed) W. H. HEARST, Minister of Lands, Forests and Mines.	
(As to execution by the Minister of Lands, Forests and Mines).			
(Signed) THOS. W. GIBSON.	}		(Seal)
(As to execution by Shirley Ogilvie and Frank Harris Anson).		(Signed) SHIRLEY OGILVIE	(Seal)
(Signed) S. A. MCARTHUR.		(Signed) FRANK HARRIS ANSON,	(Seal)
(Signed) G. ALFRED MORRIS.			
(Signed) J. A. MCANDREW.			

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*Appendix No. 34.*

AGREEMENT FOR SALE OF TOWNSHIPS OF KENDREY AND HAGGART.

THIS AGREEMENT made in duplicate this fourteenth day of June, 1912.

BETWEEN:

HIS MAJESTY, represented by the Honourable the Minister of Lands, Forests and Mines for the Province of Ontario, hereinafter called "the Government."

*Of the First Part,*

and

WILLIS K. JACKSON, of the City of Buffalo, in the State of New York, one of the United States of America, WILLIAM A. RUSHWORTH, of the City of Toronto, in the County of York, in the Province of Ontario, and ERNEST S. WIGLE, of the City of Windsor, in the County of Essex, in the Province of Ontario, hereinafter called "the Purchasers,"

*Of the Second Part.*

WITNESSETH that in consideration of the mutual covenants, promises and agreements hereinafter set forth the parties hereto have agreed with each other as follows:

1. Concurrently with the execution of this agreement the Purchasers will pay to the Government the sum of \$98,364.00, the receipt whereof is hereby by the Government acknowledged, which said sum of \$98,364.00 is the price or consideration paid by the Purchasers to the Government for this agreement, and is and shall be deemed to be fully earned by the Government by the execution of this agreement, and the Purchasers shall not be entitled on the termination of this agreement by forfeiture or otherwise to any repayment, drawback or relief whatsoever in respect of the said sum of \$98,364.00 or any part thereof, but have received and shall be deemed to have received full value therefor in the original execution of this agreement by the Government.

2. Subject always to each and all of the terms of this agreement the Government, under and by virtue of all rights or powers it thereunto enabling, doth grant, concede and confer unto and upon the purchasers the exclusive power, right, license and authority, for the purposes of and during the continuance of

this agreement, to enter into and upon those certain parcels or tracts of lands and premises hereinafter set forth and to take possession and control of the same and to clear, cultivate, occupy, use and enjoy the same. The said lands are as follows:

*First:* The Township of Kendrey, in the district of Sudbury, now in the new district of Temiskaming as created by 2nd George 5th, chapter 21, containing a lot area of 50,002 acres, more or less, as shown on plan of survey by Ontario Land Surveyor, J. W. Fitzgerald, dated 5th December, 1907, of record in the Department of Lands, Forests and Mines, save and excepting therefrom the following reservations:

(a) The beds of the Mattagami and Muskego Rivers and all lakes within the Township, and all islands, islets and reefs in said lakes or rivers, together with a road allowance one chain in perpendicular width laid out along each bank of said rivers and around the shores of said lakes.

(b) The right of way, station grounds and extra land of the National Trans-continental Railway across said Township as shown on plan of survey of said right of way dated 27th March, 1909, signed by S. N. Parent, Chairman; Hugh D. Lumsden, Chief Engineer, and A. S. Cotton, Ontario Land Surveyor, of the record in the Department of Lands, Forests and Mines.

(c) All regular road allowances as shown on plan aforesaid by J. W. Fitzgerald, Ontario Land Surveyor.

(d) Broken lots 24 and 26, concession 9, broken lots 24, 25 and lot 26 in concession 10, containing by admeasurement 776 acres more or less, for the purposes of development of the water power at Smooth Rock Falls on the Mattagami River.

(e) Those portions of broken lots 25 and 26, concessions 5 and 6, subdivided into lots and streets for townsite purposes as shown on plan of survey by H. M. Anderson, Ontario Land Surveyor, dated October 7th, 1911, of record in the Department of Lands, Forests and Mines, together with all that portion of lot 25, concession 5, and broken lot 26, concession 5, east of the Mattagami River not included within such subdivision, also that part of broken lot 25, concession 6, and that portion of broken lot 26, concession 6, lying east of the Mattagami River and not included in such subdivision, containing by admeasurement an area of 404 acres more or less.

(f) Reserving also the right over a strip of land 100 feet wide in any and all parts of the Township for the purpose of constructing a pole or pipe line to transmit electricity or power.

*Second:* The Township of Haggart, in the district of Sudbury, now in the new district of Temiskaming as created by 2nd George 5th, chapter 21, containing a lot area of 49,860 acres, more or less, as shown on plan of survey by Ontario Land Surveyor, J. W. Fitzgerald, dated 25th November, 1908, of record in the Department of Lands, Forests and Mines, save and excepting therefrom the following reservations:

(a) The right of way, station grounds and extra land of the National Trans-continental Railway across said Township as shown on plan of survey of said right of way dated 27th March, 1909, signed S. N. Parent, Chairman; Hugh D. Lumsden, Chief Engineer, and A. S. Cotton, Ontario Land Surveyor, of record in the Department of Lands, Forests and Mines.

(b) The bed of the Muskego and Poplar Rapids Rivers, also the bed of Departure Lake and all other lakes within the township, and all islands, islets

and reefs in said lakes or rivers, together with a road allowance one chain in perpendicular width laid out on each bank of the said rivers and around the shores of the said lakes.

(c) All regular road allowances as shown on the plan aforesaid by J. W. Fitzgerald, Ontario Land Surveyor.

(d) Reserving also the right over a strip of land 100 feet wide in any and all parts of the township for the purpose of constructing a pole or pipe line to transmit electricity or power.

3. The purchasers will forthwith proceed to settle and colonize the said lands with bona fide occupant farmers and settlers, such settlement and colonization to be effected with all reasonable despatch. And, without limiting the generality of the above obligation, the purchasers guarantee that within two years from the date hereof they will cause at least two thousand four hundred acres of the said lands to be occupied and settled by at least sixteen bona fide farmers or settlers, and that during each succeeding period of one year thereafter, for a period of nineteen years, they will cause at least two thousand four hundred additional acres of the said lands to be occupied and settled by at least sixteen additional bona fide farmers and settlers. Such farmers and settlers to be such and the occupation and settlement work by them to be such as to satisfy requirements similar to the present requirements in like case of the Free Grant and Homestead Act and the regulations thereunder. In computing the number of farmers and settlers occupying and settling and the acreage occupied and settled by them from year to year as aforesaid any excess or deficiency of numbers or acreage in any year shall be carried forward to the credit or debit, as the case may be of the year following, and so from year to year, and where in the case of any farmer or settler previously credited his occupation and settlement subsequently fails to be such as to satisfy the provisions of this clause the deficiency so arising in numbers and acreage shall be forthwith chargeable against the year then current and succeeding years. Provided always that the purchasers shall not be deemed to be in default under the terms of this clause, so far as relating to specific numbers and acreage guaranteed from year to year, unless and until the deficiency in question has failed to be rectified in subsequent balances within at least two years, but this proviso shall not apply to any failure to meet the obligations of this clause as regards at least five settlers and a proportionate acreage in the first period of two years or as regards at least five settlers and a proportionate acreage in the second period of one year.

4. If and as requested by the Minister of Lands, Forests and Mines for the Province of Ontario, hereafter in this agreement referred to as the Minister, the purchasers will improve portions of the said lands as farms, in each case by clearing and preparing for cultivation such area thereof as the Minister may designate, not exceeding twenty-five acres, and by building a house and barn thereon of such size and character as the Minister may prescribe, not exceeding in cost one thousand dollars, and by digging a well or otherwise as the Minister may prescribe, and shall offer such farms for sale at prices and upon terms to be approved of by the Minister.

5. The purchasers will at their own expense, as directed by, in a manner approved of by and to the satisfaction of the Minister, construct, build and for a reasonable period maintain all roads, bridges or other road improvements in the said Townships of Kendrey and Haggart, as such construction, building and maintenance may from time to time be required in the interest of said settlers.



6. The purchasers will undertake that proper and adequate provision is made, to the satisfaction of the Minister, for the institution of public schools in the said Townships and for the erection of suitable school buildings. Provided always that such schools shall be entitled to the usual Government and Municipal aid and support.

7. In order to facilitate the colonization and settlement of the said lands, the purchasers will erect thereon a hotel, store building, housing for accommodation and other buildings or works necessary to meet requirements in advance of town or village settlements and will also erect, construct and equip thereon a permanent saw-mill, planing-mill and lath-mill, the buildings and works in this clause mentioned to be undertaken and commenced within ninety days from the date of this agreement, and to be completed within twelve months from the date of this agreement, and at least \$70,000 to be expended on such buildings and works.

8. The purchasers shall cut the timber from the said lands in blocks or areas of not less than eighteen hundred acres at one time, the location of such blocks or areas to be first approved by the Minister. The lands so cut over shall be properly cleared in a good and workmanlike manner and to the satisfaction of the Minister, and the timber is not to be specially selected but the cutting is to be done out of a face. Provided always that not less than twenty acres of timber must be left for each farm as a wood lot. No land shall be cut over in advance of settlement except to an extent limited until the expiry of five years from the date hereof to fifteen thousand acres, such limit to be increased each year thereafter by two thousand acres until a limit of forty-five thousand acres has been reached. All timber cut from the said lands, other than timber which in the opinion of the Minister is useful for pulp only, shall be manufactured in the mills of the purchasers and disposed of within the said townships or locally to the satisfaction of the Minister or otherwise to the satisfaction of the Minister. No pulp wood cut from the said lands shall be exported from Canada, without the permission of the Minister.

9. The purchasers will purchase from said settlers, on reasonable terms, any timber on the lands settled by them and will also give said settlers the preference for their teams and labour in cutting and removing timber from their lands and also in cutting and removing timber from the other lands of the purchasers.

10. All sales of land by the purchasers to settlers, all agreements between the purchasers and any settler or settlers and all regulations by the purchasers affecting any settler or settlers shall before becoming effective be submitted to and receive the approval of the Minister. Provided always that the Minister, in considering, pursuant to this clause or to clause 4 of this agreement, the prices sought by the purchasers to be placed upon the said lands from time to time, shall have regard to the fair market value of the said lands in view of the enhancement of such value brought about by reason of the colonization and improvement of the locality through the efforts of the purchasers.

11. The purchasers shall not issue or publish any prospectus, advertisement or other publication respecting the said lands or the settlement of the same, until such prospectus, advertisement or publication has been submitted to and approved by the Minister.

12. The purchasers shall not lay out any townsite or sites on the said lands except with the approval of and in a manner and upon terms and conditions satisfactory to the Minister.

13. As and when the purchasers shall from time to time cause parcels of

the said lands, not exceeding in each case one hundred and fifty acres, more or less, to be occupied and settled in such manner, as regards qualifications of occupant and character, continuity and duration of occupancy and settlement work, as to satisfy requirements similar to the present requirements in like case of the Free Grant and Homesteads Act and the regulations thereunder, the Government shall, on the application of the purchasers, issue a Patent for the parcel in question to the settler in question, or, where there remains unperformed or only partly performed some obligation by such settler to the purchasers, to the purchasers in trust to convey the same to such settler on the performance of such obligation, or otherwise upon such terms for the due securing of the rights both of the purchasers and of such settlers as the Minister shall determine. Provided always that the Minister may in any case, in which in his opinion such a course is desirable, issue the Patent to the settler in question upon his own application and with or without the imposition of terms in favour of the purchasers.

14. The Government will also grant to the purchasers Patents for such portions of the said lands as shall in the opinion of the Minister be reasonably necessary for or in connection with hotel site, store sites, mill sites or other building sites required for the purposes of the undertaking, such Patents to issue in each case on the completion of the building in question.

15. Notwithstanding anything in this agreement contained all mines, minerals and mining rights in, on or under the said lands, and, subject to the exceptions similar to those allowed by the terms of the Free Grant and Homesteads Act and the regulations thereunder, all white pine now standing or being on the said lands are and shall be excepted and reserved to the Crown, and all Patents to be issued hereunder shall be issued subject to such exception and reservation and to all other usual exceptions, reservations and conditions.

16. Upon breach or default by the purchasers in carrying out any of the terms of this agreement, this agreement and all rights, benefits and advantages of the purchasers thereunder shall, at the option of the Government, to be notified to the purchasers in writing, forthwith cease and determine, and all interest of the purchasers thereunder or in or to the said lands shall forthwith revert to and re-vest in the Government, and in such case the purchasers shall not be entitled to the return of the price paid as hereinbefore set forth as consideration for this agreement or any portion thereof, nor to reimbursement for any sums expended by the purchasers under the terms of this agreement or for improvements on the said lands or otherwise, nor to any compensation or damages whatsoever. Provided always that the interests of bona fide settlers in occupation of any portion of the said lands prior to the date of such termination shall be protected by the Government in such manner as the Minister shall reasonably determine. Provided further that the title of lands for which Patents have issued shall not be affected by such termination. Provided further that before the Government shall have the right to determine this agreement as aforesaid the Government shall give to the purchasers at least six months' notice in writing stating the nature of the default in question and the purchasers shall have failed within such six months to remedy said default.

17. Time shall be of the essence of this agreement.

18. All notices to be given to the purchasers under the terms of this agreement shall be deemed to be sufficiently given if mailed postage prepaid and registered and addressed to Jackson and Tindle, Buffalo, New York State.

19. No waiver by the Government of any default by the purchasers under

the terms of this agreement shall be deemed to operate as a waiver of any other default thereunder or of any other matter or thing therein contained.

20. All questions arising between the Government and the purchasers under the terms of this agreement or as to the true construction thereof or as to true extent of the obligations of the Purchasers or of the Government to each other thereunder or otherwise shall be subject to the award, order and determination of the Minister, whose decision shall be final and conclusive as between the parties hereto.

21. No assignment of this agreement by the purchasers shall be valid unless and until the same is approved and counter-signed by the Minister.

22. This agreement shall respectively enure to the benefit of and be binding upon the respective heirs, executors, administrators and successors of the parties hereto.

IN WITNESS WHEREOF the parties hereto have hereunto set their respective hands and seals the day and year first above written.

Signed, sealed and delivered in the presence of	}	
As to the signatures of Willis R Jackson and Wm. A. Rushworth.		(Signed) W. H. HEARST.
(Signed) AUBREY WHITE,		(Signed) WILLIS K. JACKSON.
(Signed) CARROLL C. HELE, as to signature of W. H. HEARST.		(Signed) WM. A. RUSHWORTH.
as to signature of E. S. WIGLE, (Signed) W. T. PIGGOTT.		(Signed) ERNEST S. WIGLE.

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*Appendix No. 35.*

INSTRUCTIONS TO J. F. WHITSON.

(Under 2, Geo. V., Chap 2.)

Toronto, 23rd May, 1912.

MR. J. F. WHITSON, O.L.S.,  
Surveys Branch, Toronto.

SIR,—Under directions of the Hon. the Minister of Lands, Forests and Mines, I have to instruct you to proceed with as little delay as possible, to carry out the following instructions:—

Under 2 Geo. V., Chap. 2, the Lieut.-Governor in Council is authorized to raise, by way of loan, the sum of money not exceeding \$5,000,000; part of which is to be expended in Northern Ontario in the making of roads.

As you are familiar with that part of Northern Ontario, in which it is desirable that roads be constructed this year, more particularly in the clay belt along the line of the Transcontinental Railway, and in the agricultural section north of

Lake Temiskaming, in the vicinity of the Temiskaming and Northern Ontario Railway; the Minister has seen fit to place you in charge of the work until further advised.

Having discussed very fully with the Minister the roads it is considered advisable to construe this season—which roads have been outlined and shown in red on a plan hereto attached—you will, as far as it is practicable, construct these roads, extending along the T. C. Ry. from the Quebec boundary, west to the town of Hearst, and as far south along the line of the T. & N. O. Railway as Englehart or thereabouts.

You are expected to conduct and carry on the work along lines effectively used in well organized business enterprises, so as to secure the best and most economical results.

Petitions are being received from different localities all over the district, to hasten the work in this or that direction. You will, however, strictly adhere to the plan as far as it is practicable and economical, and to the policy as laid down by the Minister, when discussing these questions a few days ago.

The first roads to be constructed are where settlers are most in need of them, and where the greatest good will be done to the greatest number, conforming as closely as practicable to a definite systematic plan, after considering carefully what will be required in the early extension of the settlements, or the growth of the pulp and lumbering interests.

The plan, as outlined by the Minister, contemplates, first, the construction of main high-ways or trunk roads, leading into the larger centres, railway stations, villages or towns, from the best agricultural areas, where roads have not yet been constructed; with a view to opening up for settlement new territory.

Secondly, the connecting up of all the main highways or partly constructed roads in the sections sparsely settled. The main trunk roads should, as far as practicable in the 9 mile townships along the T. C. Ry., be constructed along the right of way, so that later on they will serve to connect up the different side roads or concession roads that have been or may hereafter be constructed, either by the Government or by the municipalities.

Main highways will be required to be constructed along the outer boundaries of the different townships through which the railway passes, or in the immediate vicinity thereof, extending back therefrom from 8 to 12 miles. North and south roads should be constructed through the centre of the townships and east and west roads across the township along the centre concession line.

Where you find, after carefully examining these projected roads that—owing to the character of the country from an agricultural standpoint, or the physical features, (such as hills, valleys or swamps), or to the difficulty in procuring suitable crossings on the railway—it would be more practicable, and more in the interests of the public to construct these roads on the next side-road or concession road, you are at liberty to do so; remembering, however, that in the event of any material change from the projected plan of the Minister's system of roads to be constructed, is found necessary or expedient, you will advise the Department before proceeding with the work; so that your proposed changes may be considered, and if found satisfactory, they may be approved of.

In the 6 mile townships along the line of the T. & N. O. Railway, you will first construct roads along the outer boundaries of the townships, and only in cases where it is found more necessary, and in the public interest, will you construct interior roads.



It is considered advisable to construct a main trunk road connecting the most important stations on the T. & N. O. Railway, so as to link up the different side-roads and concession roads constructed or which may hereafter be constructed in the interior of the townships; thereby giving to the settlers access to the railway stations.

As settlement will first take place around the railroad centres and where land is best suited for agricultural purposes, you will commence your operations in or around these centres. As you are aware, there are certain sections of the clay belt better adapted for agricultural purposes than others. Before commencing operations in any particular section, you will consult well the field notes and reports of the different surveys which have been made, and will make a personal examination of the ground, so as to be able to verify those reports.

The agricultural lands along the T. C. Ry. extend over a very large area. Only the best sections will at first be opened up for settlement; and in those sections it is desirable that roads should first be constructed; so that there will be no unnecessary expenditure of public funds in the construction of roads through sections which may not be desirable for settlement in the near future.

To assist you in examining these localities, it will be necessary to employ capable men, in whom you have every confidence.

It is considered advisable to cut out the roads where practicable the full width of 66 feet, more particularly in those portions of the country where the land is comparatively level, and covered with a thick growth of timber; so that the roads can be properly drained.

The timber cut on the road allowance must not be fallen off the right of way, but should be carefully piled so as to reduce to a minimum the danger of fire spreading. Every man in your employment should be advised as to the necessity for care in the use of fire, and every precaution must be taken when burning off the debris, so that no damage is done to the forests adjacent to the roads, or to settlers' improvements.

The roads should be well drained and graded in a proper workmanlike manner. The character of the roads will depend in a measure upon the amount of traffic that will be likely to pass over them in the near future. The foundations of the roads, however, should be so constructed that permanent roads may, when required, be constructed thereon.

You will keep a strict account of all moneys paid out in connection with the work, taking the necessary receipts or vouchers therefor. Your accounts should be so kept that at any time when called upon, you can give the cost of each road. The receipts or vouchers you will forward to this Department periodically; and will from time to time forward a statement of the total amount expended to date so that the Department will be enabled to keep an exact check on your expenditures.

Whenever you require advances to carry on the work, you will forward to this Department the necessary requisition.

You will require a thoroughly competent and reliable bookkeeper, to keep the accounts in proper shape; and such a man will be selected as soon as you have commenced operations.

When in the progress of your work you find any localities where settlers have gone in, and have no communication by roads outside the localities mapped out, you will notify this Department as to the number of the settlers, the necessity for roads, etc., so that the matter may be considered.

You will engage the necessary laborers, teams, engineers and clerical staff, paying them at the current rate of wages paid in the locality of the work. Where settlers can be secured in the vicinity of the work, and are capable and willing to perform the kind of work required, you will in every instance engage them.

In the employment of men, you will make no distinction, as the Department will require of every man employed a day's work for a day's pay; merit being the sole consideration in the payment of wages. Before hiring your inspectors, foremen or timekeepers, you will make diligent enquiry, and ascertain that they are capable and trustworthy. The duty of selecting your men devolves upon yourself, and you will be held responsible for the results of their labour.

You will purchase the necessary supplies, camp equipage, tools and road machinery, where you can secure the best value for the amount expended. You will keep yourself posted on the market prices of supplies, etc., required on your work. You will see that your camp equipage, tools, machinery, etc., is properly looked after; and that there be no waste of provisions around your different camps.

Where you have found by experience that a certain class of work can be performed cheaper by contract than by day labour, you will be at liberty to let small contracts, after making careful examination and estimates.

You will report from time to time on the progress of your work; and if you are at any time in doubt as to the advisability of constructing certain roads, you will apply to this Department for instructions.

You will, where necessary, engage proper office accommodation, and will construct such buildings as are necessary for the protection and storing of your camp outfits, provisions, tools and machinery.

Yours truly,

(Sgd.) AUBREY WHITE,

*Deputy Minister of Lands and Forests.*

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*Appendix No. 36.*

REPORT ON THE CONSTRUCTION OF ROADS IN NORTHERN ONTARIO, UNDER THE PROVISIONS OF 2 GEO. V., CHAP. 2.

TO THE HON. W. H. HEARST,

*Minister of Lands, Forests and Mines, Ontario.*

SIR,—I have the honour to submit my report of the work done under the Northern Development Branch of the Department of Lands, Forests and Mines, on the Construction of Roads in Northern Ontario, under the provisions of 2 Geo. V., Chap. 2.

Under instructions, dated the 23rd of May, 1912, I proceeded to the town of Cochrane at the junction of the National Transcontinental Railway and the Temiskaming and Northern Ontario Railway.

After making a personal examination of the townships in the vicinity of Cochrane, I travelled over the different side-lines and concession lines along which it was proposed, in my instructions, roads should be built, if no engineering difficulties were met with and the land was found suitable for settlement. I com-

menced the construction of my first road on the boundary between the Townships of Glackmeyer and Lamarche, east and west from the town of Cochrane; which road will form the main highway running east to the Abitibi River and the Quebec boundary, and west to the Frederickhouse River, or to the town of Hearst, the first divisional point on the National Transcontinental Railway west of Cochrane, and distant therefrom 130 miles.

I had some difficulty at first in procuring the required number of labourers, as nearly all the available men in that part of the country were otherwise engaged on railroad construction work, and the settlers were occupied in clearing their lands. About the 20th of June I succeeded in securing 50 men, and began operations; and from that time on I had no great difficulty in securing the number of men I required. By the end of September I had 650 men on the work.

The operations of the season of 1912 extended east in townships already surveyed along the National Transcontinental Railway from the town of Cochrane to the Inter-Provincial boundary, a distance of 72 miles; and west in places along the railway as far as the town plot of Hearst, at the junction of the National Transcontinental Railway and the Algoma Central Railway; and southerly in the Townships along the Temiskaming and Northern Ontario Railway from the town of Cochrane to the town of Englehart, a distance of 115 miles.

The roads constructed in the large or nine-mile townships along the National Transcontinental Railway were along the outer boundaries of the townships, and north and south through the centre; and east and west across the centre, where it was at all practicable to follow those lines. In the smaller, or six-mile townships along the Temiskaming and Northern Ontario Railway, the work was confined in most instances to the outer boundaries of the townships only, except where the physical features of the country made it impracticable to follow these boundaries. In such cases, the most suitable lines were selected in the interior of the township.

In order to give settlers along the Temiskaming and Northern Ontario Railway access to the different stations thereon, it was found necessary to construct a trunk road along the right of way, to connect up the different sideroads and concession roads which had already been constructed by the Department of Public Works during the last few years, in the townships adjacent to the railway. This trunk road was begun near the town of Matheson and extended north and south for a distance of 25 miles. Besides this trunk road, roads were constructed along the boundaries of several of the townships; and in some instances, where it was found impracticable to use the boundaries, interior roads were constructed in lieu thereof.

In the vicinity of Cochrane roads were constructed along the outer boundaries of the different townships along the National Transcontinental Railway for a distance of over 20 miles west of Cochrane, and 12 miles east, and extending 12 miles north of the railway and over 6 miles south. These townships were divided by roads running north and south through the centre, and east and west across the centre.

A trunk road was also commenced on the National Transcontinental Railway, near the Quebec boundary, through a large area of first class agricultural land, contiguous to a settlement already begun in the Province of Quebec.

At the town of Hearst, a trunk road was begun, running west from the town to the Algoma Central Ontario Railway, which will form part of the main trunk



road, and east along the right of way of the National Transcontinental Railway, to open up a fine agricultural section contiguous to the town of Hearst.

The continuous rainy weather of last season, beginning about the middle of July, made it difficult to complete the grading of many roads and it was almost impossible to burn off the timber and debris. The roads, however, were all well cut out the full width and the central portion grubbed 26 feet in width ready for grading. The timber and brush was well piled so that no difficulty will be met with next season in burning it off as soon as the weather is at all favorable.

Herein is a description of the different roads cut out and graded; the amounts expended thereon, and also a general description of the character of the country through which these roads were laid out.

The total number of miles cut out or improved during the season of 1912 is 233; of which 210 is entirely new road; and the balance 23 miles, roads which have previously been cut out or partly cut out, and were improved by grading, widening, ditching, or by the construction of crosslay thereon. 39 miles of the new road, and 11 miles of the old road has been graded, or 50 miles in all.

The work was carried on strictly in accordance with the instructions and performed as economically and expeditiously as possible, both in the employment of men and in the purchase of supplies, road machinery, etc. In the progress of the work I was assisted in every way possible by the officials of the Temiskaming and Northern Ontario Railway Commission; and along the line of the National Transcontinental Railway by the contractors, in the forwarding of supplies and men from point to point.

With reference to the country through which these roads have been constructed, I am glad to be able to report that at least 75 per cent. was found to be of a first class character, suitable for agricultural purposes; the soil chiefly clay and in some instances clay loam. Only a few rock exposures were met with and those of comparatively small area; and in only a few instances was sand or gravel met with, the largest area being crossed by the road running west from Iroquois Falls, which is an extension of the sand plain in the vicinity of Nellie Lake on the Temiskaming and Northern Ontario Railway. One of the greatest difficulties met with in the construction of these roads, more particularly along the National Transcontinental Railway, was the lack of gravel, sand, or stone for road material.

In some of the townships in which work was carried on there is very little waste land; occasionally a muskeg is met with but a great deal of land which appears at first sight to be muskeg is, after being burned over, capable of cultivation; and will, in my opinion, make first class meadow land. The land has nearly all good drainage in a northerly direction towards the small tributaries flowing north to the larger rivers, and with a reasonable amount of expenditure in drainage the proportion of cultivatable land herein mentioned can be very much increased.

On the higher land the timber is of fair size, reaching a diameter of from 12 to 20 inches. On the level land and muskegs the average diameter is from 4 to 9 inches, but is of very dense growth. The timber is chiefly spruce, balsam, Balm-of-Gilead and white birch; spruce predominating.

When travelling over the different roads I took particular notice of the quantity of timber cut, and while the timber large enough for lumber is not nearly



so great as in the country to the south of the Height of Land, the quantity suitable for pulpwood is much greater.

Attached to this report is a statement of the expenditures in connection with the above work.

I have the honour to be,

Sir,

Your obedient servant,

J. F. WHITSON,  
*Road Commissioner.*

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STATEMENT OF EXPENDITURE BY THE NORTHERN DEVELOPMENT BRANCH  
ON ROAD CONSTRUCTION UP TO 31st JANUARY, 1913.

Wages of workmen .....	\$112,155 76
Amount paid on Road Construction under contract .....	32,633 64
Salaries of office staff, including assistant engineers and inspectors.....	7,726 48
Camp equipment—tools, implements, road machinery, tents, blankets, utensils, etc. ....	13,035 90
Supplies, provisions, freight and express charges, etc. ....	39,594 35
Insurance on warehouse and contents, Cochrane .....	380 00
Office Expenses—	
Stationery and printing .....	\$269 35
Travelling, railway and hotel expenses .....	986 64
Postage and telegrams .....	97 48
Furniture, rent of offices, equipment and incidental expenses..	897 31
	<hr/>
	2,250 78
Medical and surgical expenses for workmen .....	248 05
Other expenses, made up of small accounts, livery, etc. ....	421 35
	<hr/>
	\$208,446 31

ARTHUR E. D. BRUCE,  
*Secretary and Accountant.*

## DESCRIPTION OF ROADS CONSTRUCTED.

*Road No. 1.*

Commencing at the south west angle of the Township of Glackmeyer, one mile west of the town of Cochrane and three-quarters of a mile south of the National Transcontinental Railway, in the District of Temiskaming, thence east along the boundary between said township and the Townships of Lamarche and Brower, and between the Townships of Kennedy and Fox, a distance of 12 miles to the side-road between lots 18 and 19 in the Township of Kennedy.

This road cut out through a thickly timbered country the full width of 66 feet, the centre 26 feet, 13 feet on each side of the centre was well grubbed; the timber cut on the road allowance for the first  $9\frac{1}{2}$  miles up to the west bank of the Abitibi River has nearly all been burnt off, and 6 miles of the road well drained and graded;  $3\frac{1}{2}$  miles of it corduroyed with timber 16 feet in length; the balance of the road is now ready for grading, with the exception of the burning off of the timber, which, owing to the rainy season, it was impracticable to do.

This road passes through a good agricultural country, except in the immediate vicinity of the town of Cochrane where there is an area of low-lying ground. Every lot along this road in the Townships of Glackmeyer, Lamarche, Brower and Kennedy has been located upon and in most instances small clearings have been started.

Two wooden bridges were constructed on this road across Brower Creek on Lot 11, and one across a small stream on Lot 26, Concession 1, Glackmeyer. The Abitibi River, which crosses the road on Lot 27, Concession 1, Kennedy, has a width of 400 feet and over 14 feet deep with clay banks over 50 feet high on the east side. It will be an expensive matter to construct an iron bridge at this point, but a ferry will answer the purpose for some time to come until the country is more thickly settled.

There is no waste land along this road; no rock, sand, or gravel to be found, the soil is rich clay loam. This road will serve as a main trunk road into Cochrane for the eastern townships along the railway. \$14,700 was expended on this road.

*Road No. 2.*

Commencing at the south west angle of the Township of Glackmeyer, thence west along the boundary between the Townships of Clute and Fournier, as far as the north west angle of the latter, a distance of 6 miles, crossing the Frederickhouse River on Lot 10, Concession 1, Clute (where it has a width of 175 feet with clay banks 45 feet high and a swift current).

The road has been cut out the full width of 66 feet and grubbed 13 feet on each side of the centre line, and is now ready for grading, although part of the timber could not be burned off owing to the wet season.

The road passes through a good agricultural country. The land has all been located on either side, and in most instances, small clearings have been started. This road is a continuation of Trunk Road No. 1, and connects the Abitibi and Frederickhouse Rivers, the distance between them being  $12\frac{1}{2}$  miles. No difficulty will be found in draining the land between these two rivers; the country has a good fall, either to the Frederickhouse or to the Abitibi Rivers.

On this road \$3,800 was expended.

*Road No. 3.*

Situate on the boundary between what was formerly the Districts of Nipissing and Algoma, on the line first run across the clay belt by the late O. L. S. Alexander Niven, in 1896, which line crosses the Canadian Pacific Railway three miles west of Sudbury. The distance between the Canadian Pacific Railway and the National Transcontinental Railway at this point being 174 miles north of Sudbury in latitude 49 degrees 5 minutes north.

This road was constructed in two sections; one section extending south from the National Transcontinental Railway between the Townships of Glackmeyer and Clute, and between the Townships of Lamarche and Fournier to the north west bank of the Frederickhouse River, a distance of  $5\frac{3}{4}$  miles. The road was cut out the full width of 66 feet and grubbed the usual width of 26 feet; the timber burned off, the first  $1\frac{1}{4}$  miles was graded, well ditched and crosslayed. The balance is now ready for grading.

There is no broken land along this road although in places, owing to lack of drainage, it was difficult to construct the road without first crosslaying. The crosslay is of the usual width of 16 feet. The land along this road was located by settlers last season and fair progress has been made in making small clearings.

North of the right-of-way of the National Transcontinental Railway, on the continuation of the same road, three contracts were let. The first for the cutting and grading of  $3\frac{3}{4}$  miles at \$1,500 per mile; the second for  $4\frac{1}{2}$  miles at \$1,500 per mile for cutting and burning off the timber the full width of 66 feet and grubbing out 26 feet in the centre, and properly draining and grading the road; and the third for the cutting and burning off 66 feet and grubbing the centre 26 feet of all roots ready for grading for \$650 per mile, the last covering 3 miles. The first two contracts for the cutting and grading have been nearly completed with the exception of the burning of some timber, the building of a few culverts, and the deepening of the drains in some instances. The third contract has been completed with the exception of the burning of the timber in places.

The total length of this road is 17 miles and is now suitable for traffic in the winter season, 9 miles of it being almost a completed road. The sum of \$21,253.00 was expended thereon. The contractors are expected to finish this work as soon as the weather conditions are suitable. On these contracts and on the portion south of the right-of-way which was performed by day labour, first class corduroy was laid wherever the conditions of the ground required it. The road has been well drained from the south west angle of the township of Glackmeyer, north between the said township and the township of Clute, a distance of 9 miles. The last three miles of the road, which is not yet graded, is on the boundary between the townships of Blount and Leitch.

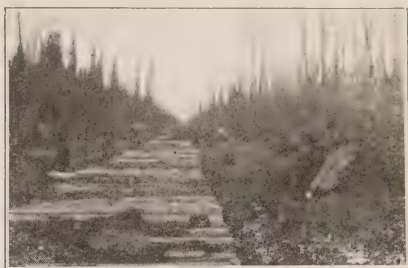
The road, through its entire distance, 17 miles, passes through a good agricultural country. Small areas of low land were met with, and a few semi-muskegs but not a single rock or gravel bed were encountered; and from the highest point on the road, which is undulating, it is possible to view, looking either way, the road as constructed from end to end. Fair progress has been made by the settlers who located along this road in the Townships of Glackmeyer, Blount, Clute, Fournier and Lamarche.

The road, when completed north a further distance of 6 miles to the north boundary of Blount and Leitch, will form the main trunk road north and south leading to the town of Cochrane for the territory lying between the Frederickhouse and Abitibi Rivers.





Transcontinental office building at Hearst.



An unfinished corduroy road through semi-muskeg land.



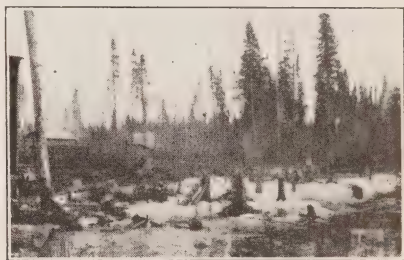
Looking east on the Transcontinental Railway, towards the Abitibi River, sixteen-mile tangent.



A settler's home, township of Glackmeyer, three miles north of Cochrane.



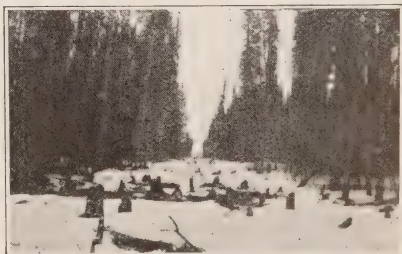
A road cut-out, south boundary of Glackmeyer.



A settler's clearing in the township of Glackmeyer.



Township of Sargent, near the Quebec boundary, showing railroad construction camps.



A new road on the old District boundary between Algoma and Nipissing, two miles west of the town of Cochrane.



*Road No. 4.*

This road extends east through the centre of the Township of Glackmeyer between Concessions 6 and 7, commencing on the old boundary between the Districts of Nipissing and Algoma, as described under Road No. 3, a distance of 8 miles, to the west bank of the Abitibi River on Lot 3, Glackmeyer.

Previous to my commencing work on this road, two miles had been partially cut out and about  $\frac{1}{2}$  mile corduroyed; which corduroy, however, during the fire of 1911 was partially destroyed. The road has been widened and graded and the crosslay that was burnt renewed, and over a mile of additional crosslay laid. The road was cut out the full width of 63 feet and grubbed the usual width of 26 feet in the centre for a distance of  $5\frac{1}{2}$  miles, and the balance,  $2\frac{1}{2}$  miles, has been cut out and grubbed. Two bridges have been constructed, one at the head of Lillabelle Lake on Lot 24, and one across Brule Creek on Lot 12. The ungraded portion is in good condition for winter travel. The portion graded has been well drained.

The land along this road is first class, well timbered; the soil, a clay or clay loam; every lot has been settled upon and in several instances from 10 to 30 acres cleared. Very little waste land was met with.

\$8,800 was expended on this road.

*Road No. 5.*

Constructed west across the centre of the Townships of Clute and Calder, between Concessions 6 and 7, a distance of 18 miles. The first  $2\frac{3}{4}$  miles west to the east bank of the Frederickhouse River has been well graded and ditched, although in some places the timber still requires to be burned off. This portion was performed under contract by E. Pauze at \$1,500 per mile. The work has not yet been taken off the contractor's hands, as in some places it was found on examination that the drainage is not complete. This will be completed by the contractor as soon as the weather conditions are favorable.

\$3,800 has been advanced on this contract.

Crossing to the west bank of the Frederickhouse River the road was continued west along the centre line of the townships to the road allowance between Lots 12 and 13 in the Township of Calder, a distance of  $10\frac{1}{4}$  miles. It was cut out the full width of 66 feet, the centre part 26 feet well grubbed, and with the exception of the burning of the timber, is now ready for grading. Part of it has been crosslaid and several culverts constructed. This work was performed by day labor at a cost of \$600 per mile or \$6,150.

Still continuing west on this road from the side-road between Lots 12 and 13, a contract was let for the cutting out of the road the full width of 66 feet and the grubbing of the centre portion 26 feet to the west boundary of the township, a further distance of 5 miles, at \$650 per mile. The cutting and grubbing, and part of the burning off has been done, and \$2,750 paid on account of the contract, leaving a balance of \$500 still to be paid as soon as the timber is burned off. The total amount expended on the three sections of road No. 5 being \$12,700.

This road across both the townships of Clute and Calder passes through a good agricultural country; no rock exposures, sand or gravel were encountered. A few semi-muskegs were met with and no land not capable of being thoroughly drained at a reasonable cost. The chief timber found is spruce up to 16 inches,



Winter view of roads cut out through semi-muskeg, Township of Glackmeyer.



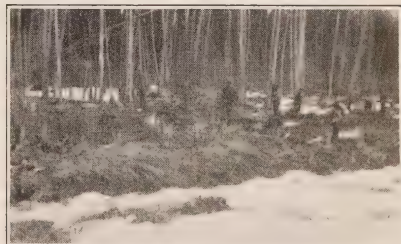
Burning off the right of way on the trunk road west of Cochrane.



A road camp, Township of Glackmeyer.



The first theatre in Hearst.



Township of Lamarche.

Balm-of-Gilead and poplar up to 18 inches in diameter, and some small white birch. Through the Township of Calder several small settlers' clearings were met with. The Township of Clute is well drained by the Frederickhouse River and its tributaries the Buskegow and Deception Creeks; a small saw-mill is located on the Buskegow Creek on the line between Lots 12 and 13. The western part of Calder Township is well drained by the Driftwood River and numerous small streams flowing into it.

This trunk road as now cut out and partly graded across the centre of the Townships of Glackmeyer, Clute and Calder has a total length of  $26\frac{3}{4}$  miles, of which 18 miles are through the Townships of Clute and Calder. The National Transcontinental Railway crosses these townships from east to west.

#### *Road No. 6.*

A north and south road through the centre of the Township of Calder was constructed, 9 miles in length, between Lots 12 and 13. A contract was let for the cutting and burning off the timber on the road 66 feet wide, and grubbing the centre 26 feet, to A. Allard at \$650 per mile. The road has been cut out the full width of 66 feet and well grubbed 26 feet in the centre, and part of the timber burned off. With the exception of the burning of the balance of the timber the road is now ready for grading. \$4,950 has been paid on account of this contract. The burning of the remaining timber will be done as soon as the weather is favorable.

The road passes through a good section of agricultural land gently undulating, with here and there a few small areas of semi-muskeg land.

#### *Road No. 7.*

A road on the boundary between the Townships of Clute and Calder was cut out across the 1st to the 10th Concessions inclusive, a distance of  $7\frac{1}{2}$  miles and a bridge built across Deception Creek on Concession 5, and considerable corduroy laid. This road was cut out the full width of 66 feet and grubbed the usual width of 26 feet, although very little burning of the timber has yet been done.

The road passes through a very fine farming country; very little broken land; no stone, sand or gravel was met with, and the land thickly timbered with spruce, balsam, Balm-of-Gilead, white birch and poplar. Settlers who located along this road early last spring have made fair progress in the performance of their settlement duties. Every lot has been located, some of the settlers having packed in their household effects along the blazed trail before the road was cut out. The same remarks will apply to several settlers along the centre line east and west through Clute.

This work was performed by day labor at an average cost of \$525 per mile, including the construction of a bridge across Deception Creek and the laying of considerable corduroy in places.

\$3,950 has been expended on this road.

#### *Road No. 8.*

A road was constructed between Lots 18 and 19 across Concessions 1 to 12 inclusive, through the Township of Clute a distance of 9 miles. The road was cut out the full width—66 feet—grubbed the usual width—26 feet—in the centre and





A road camp in settler's clearing near the Abitibi River, Township of Brower, showing poplar, white birch and spruce timber.



A field of oats on the Experimental Farm on the T. & N. O. Ry., Township of Clergue.



the timber partly burned off, south of the railway. This work was performed by day labor at an approximate cost of \$630 per mile. The road crosses the Buskegow Creek in the 5th Concession where the river has a width of about 75 feet with high clay banks.

There is very little waste land along this road, although, in a few places, semi-muskegs are met with. The general character of the country, however, is rolling; the soil is a rich clay loam; the timber of the usual character, spruce predominating with poplar, Balm-of-Gilead and white birch on the high land. The lots along this road are all located and in many instances fair progress has been made by the settlers in making small clearings.

\$5,650 was expended on this road.

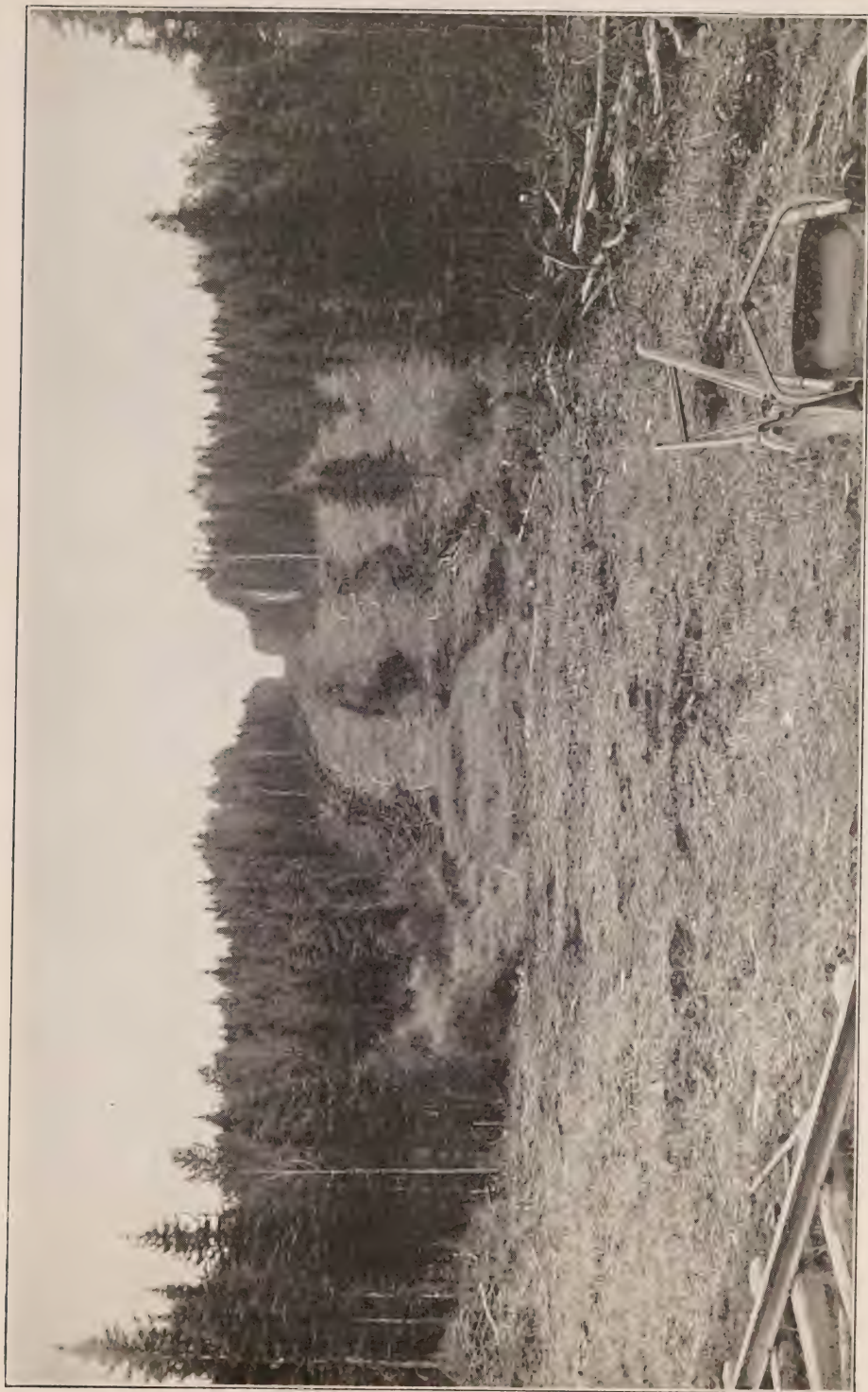
#### *Road No. 9.*

Returning again to the Township of Glackmeyer, a road between Lots 18 and 19 across Concession 1, was cut out the full width and well graded. The balance of this road across Concessions 2 to 12 inclusive was cut out 3 years ago by the Department of Public Works, and partly graded as far as the line between Concessions 6 and 7. Across part of Concessions 9 and 10 the road was graded last season by the Department of Public Works. On the 2nd, 3rd and 4th Concessions there are two large semi-muskegs, one of them about  $\frac{1}{2}$  a mile in length which had not been corduroyed, but ditched; the other one, about  $\frac{3}{4}$  a mile in length had been well corduroyed but not ditched. I corduroyed the first mentioned one and deepened the ditches, and ditched the other on both sides, and re-graded and ditched parts of the balance of the road up to the 12th Concession inclusive, but owing to the wet season could not complete the work across the 12th Concession. I also cut down several steep hills on this road expending \$4,400 thereon up to the north boundary of Glackmeyer.

The land along this road was the first located upon in the vicinity of Cochrane, and, with the exception of the semi-muskegs above mentioned, the land is fairly good; the soil a clay or clay loam with the exception of one sand hill. Almost every lot is settled upon; in a few instances from 20 to 40 acres have been cleared on individual lots with fairly good buildings. There are two sawmills on this road, one in the 2nd Concession and one in the 10th.

This road has also been continued north as far as the Abitibi River across Concessions 1 and 2, Township of Blount, a distance of  $1\frac{1}{4}$  miles. The work was performed under contract for the cutting out, grubbing and burning at \$650 per mile. \$337.50 has already been advanced; the work has not yet been completed; it has been cut out and grubbed in the usual way but not burned off.

This road passes through a very fine country. Several years ago fire swept over a section of country along the Abitibi River in Blount and Leitch Townships and the burning off of the moss, which retains the moisture and retards drainage, has materially improved the country from an agricultural stand point. The road intersects the Abitibi River near the centre of the Long Soo Rapids, where the river is about 40 rods in width and very rapid, and it will be practically impossible, except at a very great expense, to construct a bridge at this point. An easier crossing can be made about  $\frac{1}{2}$  a mile down the stream where the river narrows down to about half its average width.



Cutting out a trunk road east from the town of Cochrane to the Abitibi River.

*Road No. 10.*

The boundary between the Townships of Glackmeyer and Blount, across part of Lot 15 and across Lots 16 to 28 inclusive, a distance of  $4\frac{1}{2}$  miles, has been cut out the usual width of 66 feet and the centre 26 feet grubbed; the timber has not, however, been burned off. The eastern mile was let by contract to E. Pauze at \$650 per mile for the cutting, grubbing and burning. \$300 has been advanced on his contract. A contract for the balance of the road across Lots 19 to 28 was let to F. Nault for cutting, grubbing and burning at \$650 per mile. Mr. Nault has completed his contract with the exception of burning off the timber and has been paid \$1,787.50 on account.

The land along this road is very fine, well drained by the Abitibi River and small tributary streams. There are several settlers located along this road who have started small clearings.

*Road No. 11.*

The road between Lots 12 and 13 across the 1st to the 6th Concession in the Township of Glackmeyer, a distance of  $4\frac{1}{2}$  miles, has been cut out the full width—66 feet—grubbed the usual width but not yet burned off. Two bridges across the Brule or Brower Creek on Concession 2 have been constructed and considerable corduroy laid.

The amount expended on this road is \$3,664.34.

There is no broken or waste land along this road although part of it is flat and will require considerable ditching.

*Road No. 12.*

The road between Lots 24 and 25 across Concessions 1, 2 and 3 in the Township of Kennedy has been cut out the full width, grubbed and ready for grading, with the exception of the burning of the timber. It was found impracticable to construct the road along the boundary line between the Townships of Kennedy and Glackmeyer across these three Concessions, inasmuch as an expensive bridge would be required across the Abitibi River on Concession 3. It is proposed to extend this road  $\frac{3}{4}$  of a mile further north and then jog west on the line between Concessions 4 and 5 to the boundary, thence north along the boundary. This road, which has a length of  $2\frac{1}{4}$  miles, was cut out and grubbed at a cost of \$1,525.00.

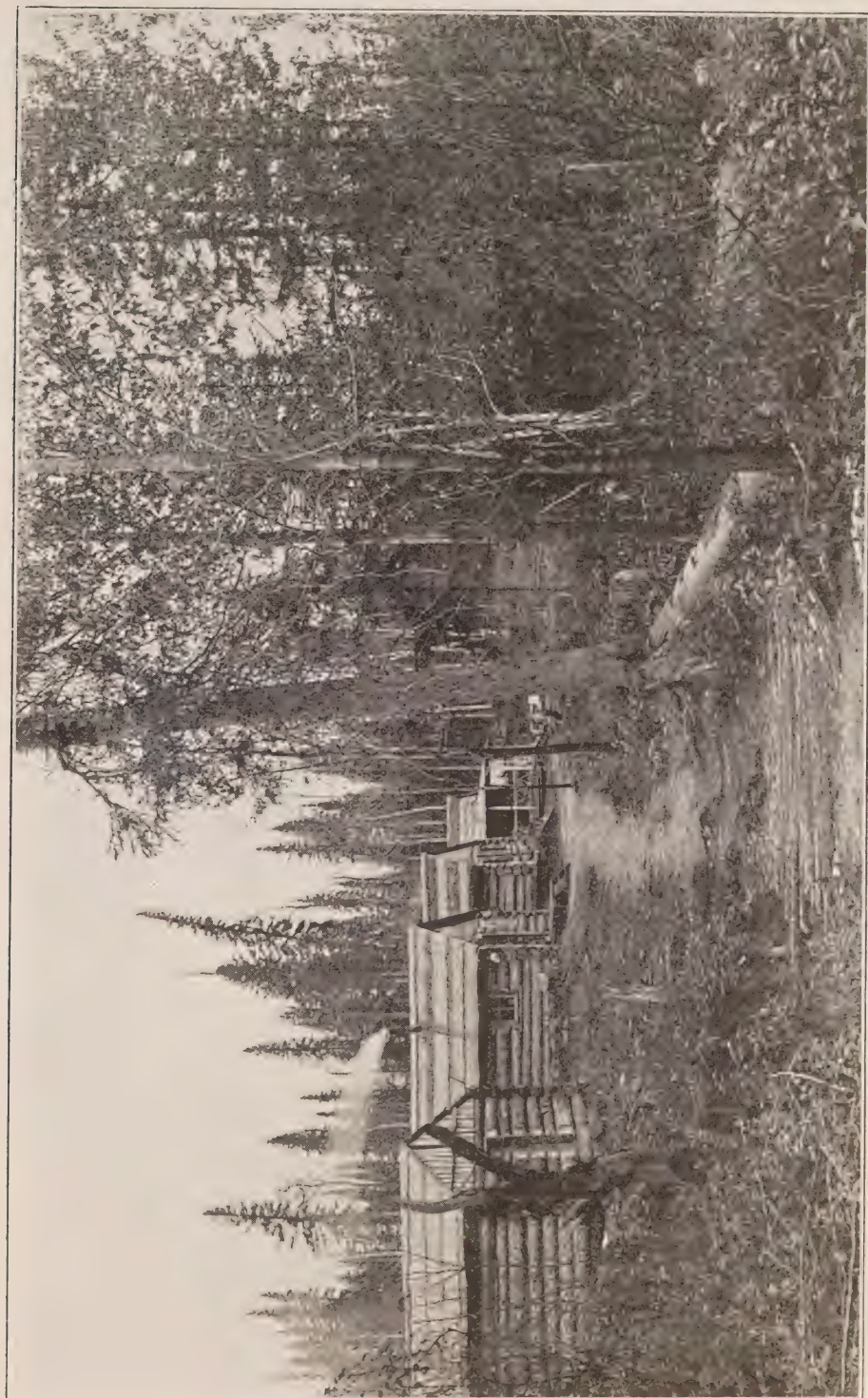
The road passes through a good agricultural country.

*Road No. 13.*

The road between Lots 8 and 9 in the Township of Lamarche, across Concessions 2 to 6 inclusive, a distance of 5 miles, has been cut out the usual width and grubbed. Across Concession 6 for one mile the road has been well graded and well ditched, and a bridge constructed across Lamarche Creek on Concession 4. A large drain was constructed on each side of the road across the 6th Concession through a large spruce and tamarac swamp. These ditches will serve to drain the town of Cochrane and a large area surrounding it. The land in part of the 6th Concession is very swampy, with, however, sufficient fall for good drainage. The balance of the road is through fairly good agricultural land until the 1st Concession is met where the land is again swampy. Every lot on this road has been located on and fair progress is being made by the locaters.

On this road there was expended \$4,450.





Resident Engineers' camps on the T. C. R. at Nagagami River, 172 miles west of the town of Cochrane.



*Road No. 14.*

A road along the boundary between the Townships of Brower and Lamarche across Concessions 2 to 6 inclusive, a distance of 5 miles, was cut out and grubbed in the usual way and the northern mile burned off. A bridge was constructed across Brule Creek in the 6th Concession.

This road passes through a good agricultural section; the soil a clay or clay loam; well timbered with spruce, Balm-of-Gilead, white birch and poplar. Several settlers have already commenced clearing land along this road and a small saw mill is in operation on the 4th Concession. It crosses both the National Transcontinental Railway and the Temiskaming and Northern Ontario Railway.

On this road \$3,850 was expended.

*Road No. 15.*

Townships of Fox and Brower.

A road along the boundary between the Townships of Fox and Brower was cut out the full width and well grubbed across the 1st, 2nd and part of the 3rd Concessions to the National Transcontinental Railway, a distance of about  $2\frac{1}{4}$  miles. It was found very difficult to construct a crossing over the National Transcontinental Railway owing to the high embankment, and it was considered advisable to construct the road between the 2nd and 3rd Concessions in the Township of Brower, a distance of 1 mile, across Lots 1 and 2, and construct the road between Lots 2 and 3 across the 3rd, 4th, 5th and 6th Concessions in the Township of Brower in lieu thereof, to the north boundary, a distance of four miles. This road will be more in the public interest and will serve a greater number of settlers and cross the railway at Brower Siding, a very suitable place for a station and a very easy crossing. These  $7\frac{1}{4}$  miles of road were cut out the full width and grubbed, and  $2\frac{1}{2}$  miles graded and ditched.

On this road \$5,200 has been expended.

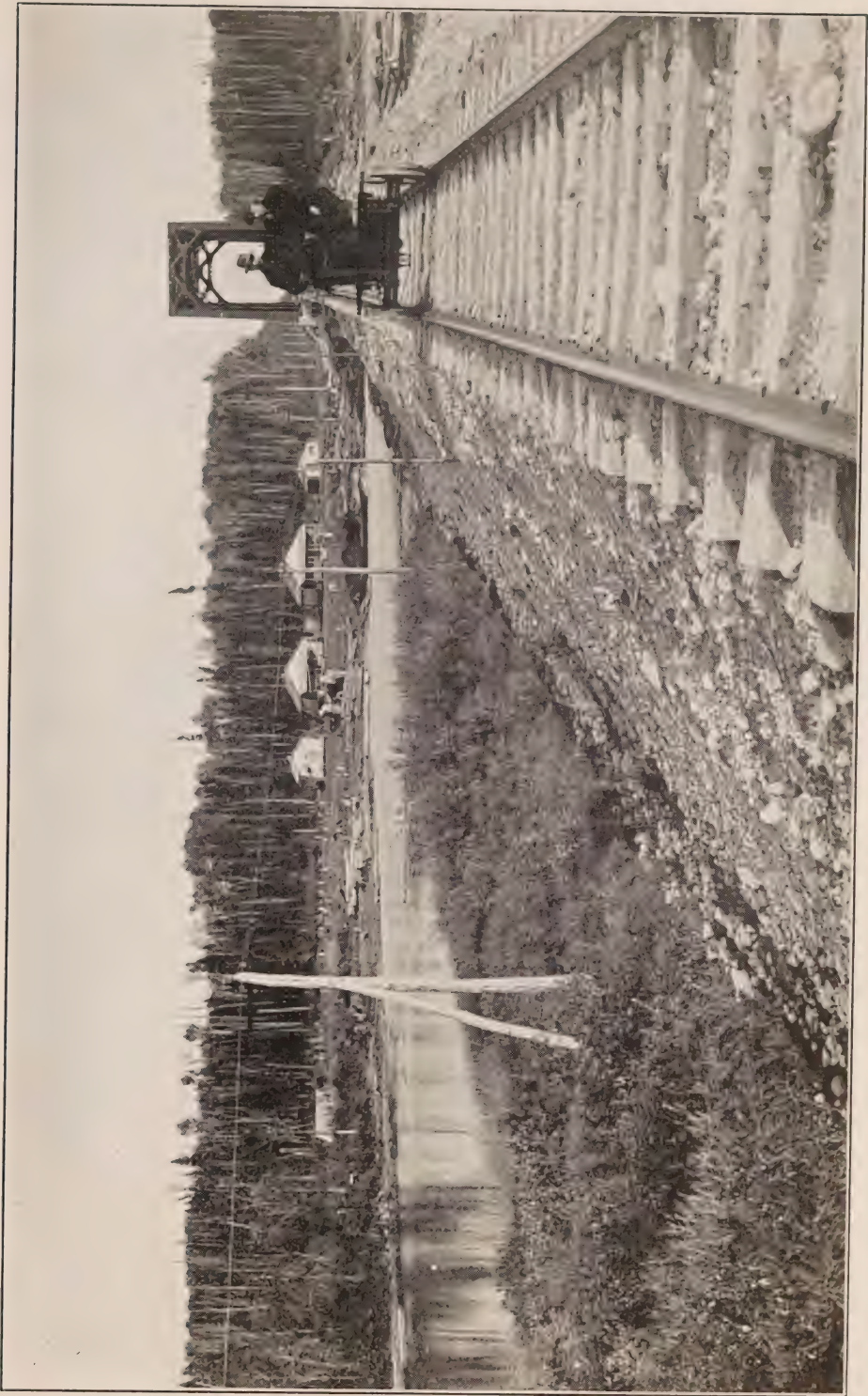
The land along this road is first class; the soil clay or clay loam and well timbered. The country along the banks of the Abitibi River is high above the bed of the stream; the clay banks of which rise to an elevation of from 20 to 75 feet.

The river has an average width of from 400 to 500 feet; the water is deep and the current swift. It is one of the largest of the many tributary streams of the Moose River and the land along the banks or in the valley is all well adapted for agricultural purposes. The timber is of the usual character common to Northern Ontario, spruce predominating, reaching from 4 inches up to 18 inches on the high land; the poplar, Balm-of-Gilead and white birch along the banks is from 6 inches to 20 inches or over in diameter. There is a small sawmill situate on the 5th Concession. The land is all located and good progress has been made; the road passes through one of the best settlements east of Cochrane.

*Road No. 16.*

A road was cut out along the south boundary of the Township of Fox across Lots 11 and 12, and along the south boundary of the Township of Brower and along the south boundary of the Township of Lamarche across Lots 1, 2 and 3, a distance of  $8\frac{1}{2}$  miles. The road was cut out the full width of 66 feet and the centre 26 feet grubbed, and is now ready for grading with the exception of the burning of the timber.

On this road \$5,200 was expended by day labour.



Travelling by motor car on the Transcontinental Railway.

The easterly  $4\frac{1}{2}$  miles of this road passes through a good agricultural country, the land is high, the soil a good clay loam, the timber of the usual character—spruce, balsam, Balm-of-Gilead, poplar, and some white birch. The balance of the road passes through low swampy land with small spruce timber. There are no settlers along this road. The road, as cut out, will give access to settlers who may hereafter locate on the higher land on the easterly  $4\frac{1}{2}$  miles of the road to the Temiskaming and Northern Ontario Railway. Part of the low land, when properly drained, will make fairly good meadow land.

#### *Road No. 17.*

A trunk road was cut out along the north side of the right of way of the National Transcontinental Railway, passing through this township for a distance of  $6\frac{1}{2}$  miles, from Lot 14 to Lot 34 inclusive. The road was cut out the full width, and well grubbed, and is ready for grading.

On this road was expended \$4,949.43.

It is proposed to extend this road easterly to the Quebec boundary, a further distance of  $4\frac{1}{2}$  miles.

This road passes through a very fine section of land; the soil is all a rich clay loam. In this township, which was surveyed last season, there is over 75 per cent. of the land suitable for agricultural purposes; and, in order to promote settlement in this township, it will be necessary to complete the road to the Quebec boundary, and to construct two roads crossing the railway at right angles, so as to give access to the lots in the rear of the township. A few hundred yards east of the Quebec boundary, in the Province of Quebec, the railway crosses the Okikodosik River, which has a width of over 150 feet, and is navigable south into the Abitibi Lakes. At this point there is a station bearing the same name as the river, and a small settlement has been started by the Quebec Government, and roads are being cut out in advance of settlement by the Government of the Province of Quebec.

To the east of the township of Sargent, in Quebec, there is a large area of fine land similar to that in the Township of Sargent, and there is every reason to believe that on completion of the roads, settlement will take place on both sides of the Inter-Provincial boundary. Already several settlers have located in Sargent. The Quebec boundary is distant 72 miles east of the town of Cochrane.

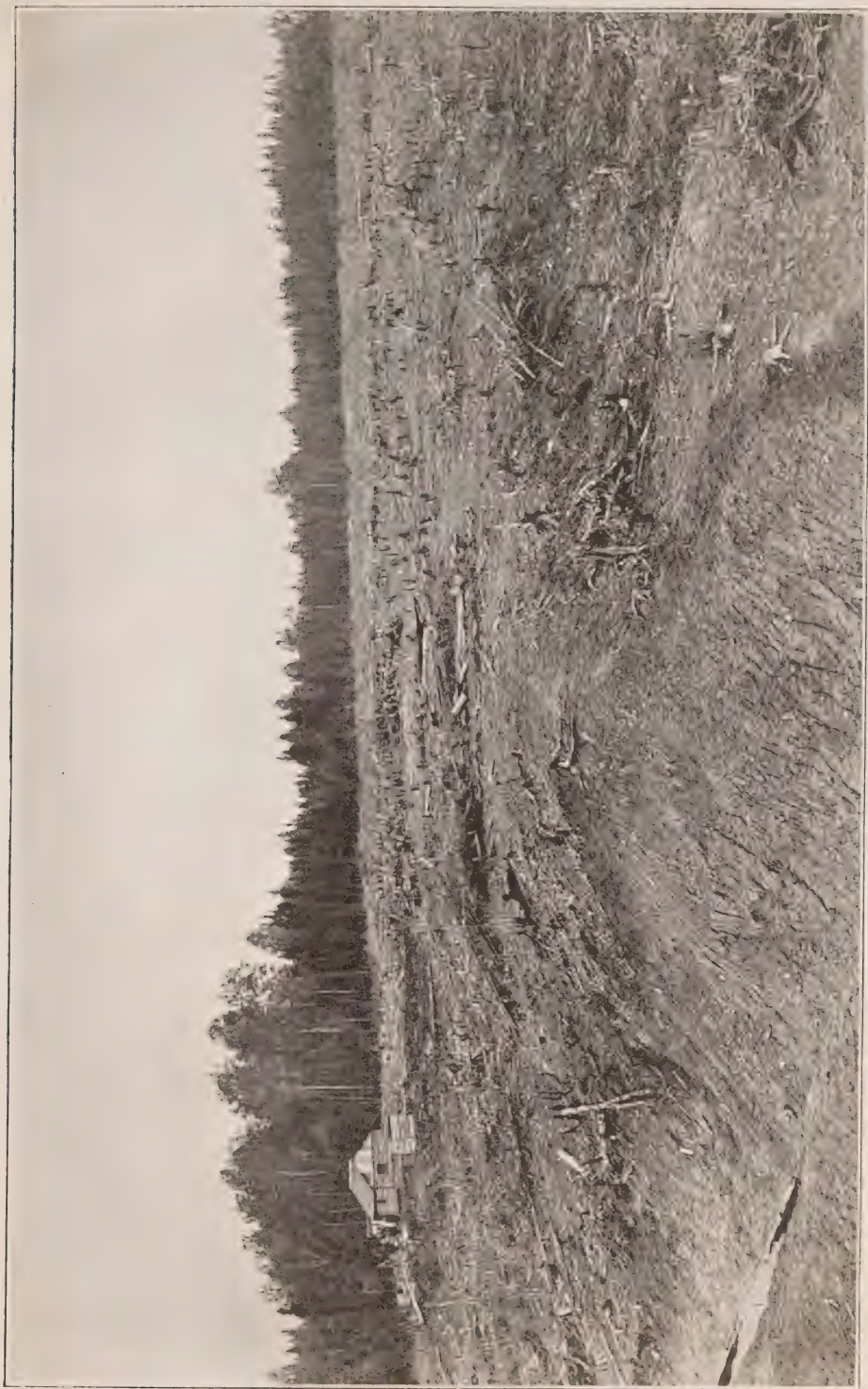
#### *Road No. 18.*

In the neighbourhood of the town of Hearst, a divisional point of the National Transcontinental Railway, 130 miles west of Cochrane.

A main trunk road was begun near the town of Hearst and constructed west with a view to connecting the said town with the Algoma Central Ontario Railway running north from Sault Ste. Marie and Michipicoton Harbour and 160 miles north therefrom for a distance of  $1\frac{1}{4}$  miles. A contract was let to P. Turgeon to cut the timber on the road, burn it, and grub the centre portion 26 feet in width, at \$650 per mile. The road is now cut out and grubbed, but part of the timber has not yet been burned off. \$625 has been paid on account of this contract. The road will be ready for grading as soon as the timber is burned off.

This trunk road was extended easterly through the town plot of Hearst along the main street which is contiguous to the southerly limit of the right of way of the National Transcontinental Railway station grounds. This road was stumped,





A settler's clearing near the town of Cochrane.



corduroyed in places, and graded for a distance of one mile, and will serve as part of the main trunk road along the line of railway between Hearst and Cochrane, which towns are 130 miles apart.

The 9th street in the town of Hearst, which intersects the railway a short distance from the station, was stumped and partly graded for a distance of a quarter of a mile, to the bank of the Mattawishquia River, or Southern boundary of the town plot. This road, when produced southerly through the township of Kendall (surveyed last season), will form part of the main trunk road projected south through the centre of the township.

On the roads in and adjacent to Hearst, in addition to the \$625 already mentioned, a sum of \$3,866.71 has been expended, or a total of \$4,491.71.

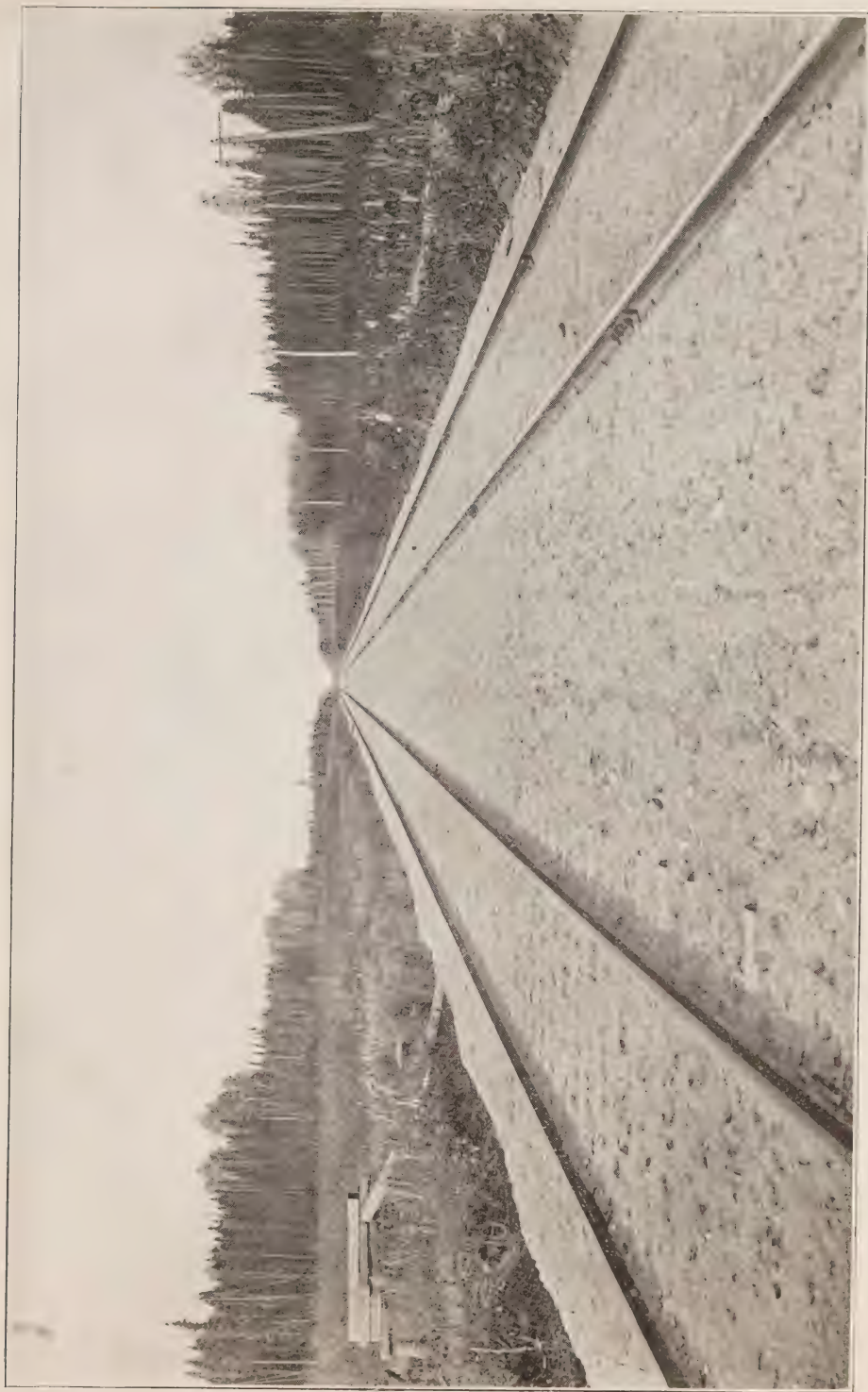
#### *Road No. 19.*

On the line of the Temiskaming and Northern Ontario Railway, 25 miles south of Cochrane, a trunk road was constructed east and west from Iroquois Falls Station, at the junction of the Porcupine Branch of the said railway, and at the junction of a branch line of the said railway now being constructed to the Pulp and Paper Mills under construction at Iroquois Falls on the Abitibi River, situate about  $7\frac{1}{4}$  miles in a north-easterly direction from the station bearing the same name. The road was cut out and grubbed west of the railway along the boundary between the townships of Calvert and Clergue, and between the townships of McCart and Dundonald for a distance of about 7 miles to the Frederickhouse River; and east of the Temiskaming and Northern Ontario Railway to the Abitibi River, about 6 miles, or in all, a distance of 13 miles. This road was also connected, by a road  $\frac{1}{4}$  of a mile in length, with Iroquois Falls Station on the Temiskaming and Northern Ontario Railway. The road passes through a country heavily timbered with large spruce, Balm-of-Gilead, poplar, white birch, and balsam. The land is rolling, and in several instances east of the railway, ravines, or gullies were met with. To the west of the railway, the road passes through a sandy plain about  $1\frac{1}{4}$  miles in width, which is locally known as the Nellie Lake Jack Pine District. On this road is also met a high rocky exposure about  $\frac{1}{4}$  mile in width, rising to an elevation of over 75 feet. A detour was made around the foot of this mountain to the south side. On this road, a bridge 130 feet in length was built, crossing a ravine at the end of a small lake on Lot 3. Also a bridge across a small stream on Lot 9. With the exception of the sandy plain above referred to, and the rock exposure, the land both east and west of the railway is fairly good agricultural land. A few semi-muskegs were met with, and in some instances the land is low. The road will require cross-laying in places, but it can all be drained at a moderate expense. Settlers have located on almost every lot in the township of Clergue, and on the 1st Concession in the Township of Calvert; also on lots in the 6th Concession of the Township of Dundonald, as far west as Lot 5.

This trunk road was constructed with a view to giving access to settlers who might hereafter locate in the townships of Little, Evelyn, and the townships to the west thereof, west of the Frederickhouse River; and also to give to settlers located in the townships of Teefy and Walker, east of the Abitibi River, access to the railway. It will be necessary to construct on the Frederickhouse River a bridge at the foot of Frederickhouse Lake. At this point, no great difficulty will be encountered in constructing a bridge; on the Abitibi River it may be practicable to construct a ferry, as the river is wide at this point.

This road was cut out the full width; the timber well piled, and the centre portion, 26 feet in width, well grubbed.

\$10,625.74 was expended on this road.



A typical view on the T. C. R. R. west of the town of Cochrane.

*Road No. 20.*

Township of Clergue.

In the Township of Clergue, on the Temiskaming and Northern Ontario Railway, south of Kelso Station a road cut out about three years ago as a winter road for mining purposes was widened from 30 feet to 66 feet, and grubbed ready for grading. This road commences at the centre of the township and runs east between Concessions 3 and 4 from Lots 7 to 12. The same road was cut out the full width east from the centre of the township across Lots 6 to 1 inclusive, and from the same point it was cut out the full width across the 3rd and 2nd Concessions, and north across part of the 4th, 5th, and part of the 6th Concessions.

A road was also cut out the usual width, and grubbed, along the boundary between the townships of Clergue and Walker, across the 4th and part of the 5th Concessions. Half a mile of the road between Lots 6 and 7, Concession 4, was well graded and ditched. A bridge was constructed on the 5th Concession and some corduroy laid. The road between the townships of Walker and Clergue, as cut out, connects with a road cut out this season by the Department of Public Works, commencing at the Experimental Farm near Monteith. In this section,  $10\frac{1}{2}$  miles of new road were cut out, and  $\frac{3}{4}$  of a mile graded, at a cost of \$9,277.44.

These roads connect Kelso Station with the Experimental Farm at Monteith, and will also serve to connect the village of Kelso with the Porcupine branch of the Temiskaming and Northern Ontario Railway. The country served by these roads is very fair agricultural land. Along the Driftwood Creek it is somewhat broken and a few rocky outcrops were met with. In some places the land is low, but there is fair drainage. There is a dense growth of timber on the ground of large size; Balm-of-Gilead, poplar, white birch and spruce, the Balm-of-Gilead reaching a diameter of 24 inches. The country is rolling, with high clay banks along the creeks; the soil is a rich clay loam.

*Road No. 21.*

A trunk road was constructed along the Temiskaming and Northern Ontario Railway from a point north of Homer Siding, in the Township of Taylor, to a point south-east of the east boundary of the township of Playfair in the Township of Cook, which road passes through the townships of Taylor, Carr, the town of Matheson, the townships of Bowman, Hislop, and Playfair, a distance of 25 miles. This road was cut out and grubbed the usual width, and about 3 miles of it ditched and graded; 25 culverts have been constructed. The ungraded portion of the road, as soon as the dry weather sets in and the timber burned off, will be ready for grading. The road will connect all the different side-roads and Concession lines on which roads have been constructed by the Department of Public Works and others in the above-named townships, and give to the settlers access to the different stations, more particularly to the town of Matheson. The road passes through a fairly good agricultural country; in some instances it is broken by ravines and a few rock outcrops, and also a few semi-muskegs. The soil, however, is chiefly clay or clay loam, with an occasional sand and gravel ridge. Fair progress has been made by the settlers who have located on the lots in the above-mentioned townships. There are some large clearings and there is every appearance that, in the not distant future, Matheson will be the centre of a prosperous farming community.

\$12,599.90 has been expended on this road.





The valley of the Abitibi River, township of Brower, near the T. C. R.



*Road No. 22.*

A road along the town line between the townships of Walker and Taylor was constructed from the railway east to the township of Carr, a distance of 3 miles. The road was well cut out and grubbed, but not burnt, at a cost of \$1,900. The road passes through a fairly good country, on which a fair beginning has been made by settlers.

*Road No. 23.*

On the town line between the townships of Taylor and Carr, a road was cut out and grubbed ready for grading, with the exception of the burning. The road is situate across the 3rd and 4th Concessions, a distance of 2 miles in length.

\$1,200 was expended on this road.

The land adjacent to this road is very fine; the soil a rich clay loam. On Lot 1, Taylor, and Lot 12, Carr, Concession 3, there are large clearings. Forty bushels of fall wheat per acre were grown on Lot 1, and, notwithstanding the backward season, ripened. Timothy, clover, and vegetables of all kinds matured, equal to any produced in Old Ontario under more favorable conditions.

*Road No. 24.*

The road between the townships of Bowman and Currie, across the 6th, 5th, and 4th Concessions, was cut out and grubbed in the usual way, and is now ready for grading, except the burning. The total distance is 4 miles, performed at a cost of \$2,868.16.

This road passes through a fairly good agricultural country. The road crosses the Way-tay-beg River, over which a bridge with a span of 70 feet has been constructed.

*Road No. 25.*

A road was constructed through the townships of Hislop and Bowman from the Temiskaming and Northern Ontario Railway south across part of the 5th, the 4th, 3rd, 2nd, and 1st Concessions, and between the townships of Hislop and Playfair across Lots 1 to 13 inclusive, a distance of  $6\frac{1}{2}$  miles, or in all a total distance of 11 miles; and a substantial wooden bridge with a span of 43 feet constructed across the Black River on Lot 4, south boundary of Hislop, and the approaches to the bridge cut down; 20 culverts built on the town line between Hislop and Bowman, and the road cross-laid in places. This work was done at a cost of \$9,311.23.

The road passes through a good agricultural country, part of which has, within the last seven years, been burned over and easily cleared. The country is rolling, and near the Black River and tributary streams it is broken by clay ridges and a few rock outcrops. The bridge is one of two across the Black River, the other being at Matheson, and will give access to a large section of agricultural land, east of the river, not yet settled on.

*Road No. 26.*

A road was built on the town line between the townships of Carr and Beatty across the 1st to 6th Concession inclusive, a distance of 6 miles. This road was well cut out and grubbed the full width, and is now ready for grading, with the



The valley of the Frederickhouse River, nine miles west of the town of Cochrane.

exception of the burning of the timber. It passes through a fine agricultural country, with the exception of the 6th Concession and part of the 5th, where there is a narrow ridge of sand. Most of the country has been burned over, and is easily cleared. The lots are all located on, and fair progress is being made by the settlers.

The cost of this road was \$3,345.86.

#### *Road No. 27.*

The road between the townships of Beatty and Hislop, known as the Munro Road, was improved and partly graded, and 6 clay hills cut down in front of Lots 7, 8, and 9, a distance of  $1\frac{1}{2}$  miles, at a cost of \$1,855.18.

This road passes through a rolling clay country broken by clay ridges; the soil is A1. The country was all swept by fire 7 years ago and easily cleared.

#### *Road No. 28.*

The Night Hawk Lake Road, on the line between the townships of Carr and Bowman was repaired and regraded from the west boundary of the town of Matheson across Lots 6 to 10 inclusive, a distance of  $2\frac{1}{2}$  miles; and the corduroy around Jean Lake which had been partly burned two years ago was replaced, and several small culverts repaired.

This work was done at a cost of \$400.

This road was originally constructed by the Department of Public Works to connect Matheson, on the T. & N. O. Railway, with the mining district around Poreupine. It passes through a good section of agricultural land.

#### *Road No. 29.*

A road between the townships of Ingram and Evanturel across part of the 2nd and 1st Concessions, and the town line between the townships of Hilliard and Armstrong across the 6th and part of the 5th Concessions, a distance of two miles, was ditched and part of it corduroyed, at a cost of \$1,154.77. This road was cut out and the greater portion of it corduroyed by the Department of Public Works early last spring. The road passes through a flat country with fairly good farming land. The road was cut out to give settlers in the vicinity of Tomstown an outlet south to Thornloe and Earleton. The ditches now constructed will assist in draining the low lying lands adjacent; there is abundance of fall.

#### *Road No. 30.*

Townships of Marter and Catherine.

A road was cut out the full width and grubbed, commencing on the line between Concessions 2 and 3 at the south-west angle of Lot 10, Marter; thence east one mile, thence north one mile, thence east one mile, to the south-east angle of Lot 7 in the 4th Concession; hence east between the 3rd and 4th Concessions across Lots 5, 4, and part of Lot 3, a distance of  $1\frac{1}{4}$  miles; thence north one mile through the centre of Lot 3, Concession 4, to the line between Concessions 4 and 5; thence east  $1\frac{1}{4}$  miles to the Windigo Road leading to Tomstown. These roads were all cut out the full width and well grubbed, and  $2\frac{1}{4}$  miles well graded, that is the road across Lots 5, 4, and part of 3, and north along the centre line of Lot 3, Concession 4, a distance of  $2\frac{1}{4}$  miles.



The road was also widened and graded between Lots 4 and 5 across part of Concession 2, Concessions 3 and 4, and part of Concession 5, a distance of 3 miles; and cut out and grubbed across part of Concession 5, Concession 6, township of Marter; and between Lots 4 and 5 across the south half of Concession 1, Township of Catherine; also cut out and grubbed along the town line between the townships of Catherine and Marter across Lots 5 and 6. This road was partly ditched on Concession 6, Marter, and two bridges or large culverts and several small ones constructed; also a bridge on Concession 5, Marter. The total length of roads cut out in the townships of Marter and Catherine is 11½ miles.

These roads were constructed at a total cost of \$10,900.

The country through which these roads are constructed is fairly good in places, and in places is very sandy, broken by ridges, and has very little timber of value. The lots are nearly all located on and some of them well improved.

#### *Road No. 31.*

Four clay hills were cut down on either side of the Blanche River, at the approaches to the bridges crossing the said river on Lot 10, Concession 5, Evanturel, and on Lot 1, Concession 3, Township of Dack; both on main travelled roads leading into Englehart. These hills in wet weather were impassable for heavy traffic.

The cutting down of the hills on Lot 10 cost \$1,000, and those on Lot 1 cost \$992.10.

The road between the townships of Evanturel and Dack, across Concessions 3 and 4, was improved by cleaning out the ditches and repairing the culverts.

The total cost of these two works amounted to \$1,992.10.

The work was badly needed, and has since given general satisfaction.

Besides the above roads, a fireproof warehouse 24 feet by 50 feet was constructed at Cochrane at a cost of \$794.89.

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#### *To the Honourable the Minister of Lands, Forests and Mines, Ontario.*

SIR,—After closing down most of the operations on the construction of roads for the season of 1912 on the 15th of November, I immediately proceeded, as directed by you, to examine the different sections of Northern Ontario where there was immediate likelihood of opening up new settlements by the construction of roads under the provisions of 2 Geo. V., Chap. 2, during the season of 1913.

#### *District of Rainy River.*

I proceeded first to the Rainy River Valley in the District of Rainy River, and drove over parts of the different roads which had already been constructed, and examined, as far as possible, the unsettled parts of the country in the valley suitable for agricultural purposes, and from my observation have made an estimate of the amount that would be required this coming season in opening up new roads and improving one main thoroughfare or trunk road from the town of Fort Frances West through the valley to the mouth of the Rainy River; and also in constructing trunk roads north and south at regular intervals, chiefly along township boundaries so as to connect up the various short roads now constructed; and also to open

up twelve new townships in which there is a large percentage of good agricultural land in which there are as yet few settlers and few existing roads.

I estimate that \$100,000 would be required in opening up 100 miles of new road, and repairing and grading 50 miles of old road.

These roads, when constructed, will allow the settlers to reach the different stations along the Canadian Northern Railway passing through the Valley.

#### *District of Kenora.*

Leaving the Rainy River Valley, I proceeded to the District of Kenora, and drove through the townships north-east, north and west of the town of Kenora and Keewatin. In these townships I found a fair percentage of agricultural land; although, speaking generally, the country is not well adapted for that purpose. Where the land is free from stone the soil is fairly good, and farming is at present being carried on in places with apparently some success. The difficulty at present, however, is that the farmers cannot get to Kenora and Keewatin with their produce, except during the winter season or during the dry seasons.

After examining the different roads which have already been opened up, I engaged a small exploration party, with a view to determining what agricultural land might be opened up by the continuation of the present colonization road west through the township of Pellatt and west towards the Manitoba Boundary; and, if possible, locate a branch road northerly to the Grand Trunk Pacific Railway; as it has been found almost impracticable, owing to the rough character of the country north or north-east of Kenora, to tap the Transcontinental Railway in that direction. I am glad to report that fair success has been met with, and my explorer reports having been able to locate a good line of road, passing through, in places, sections of good agricultural land, which will be tributary to Keewatin or Kenora. The length of the road from Kenora to the boundary is 34 miles. Of this distance, 12 miles were partly constructed last season by the Department of Public Works, and now requires to be graded. The 22 miles of proposed new road, besides opening up agricultural land, will pass through a section of country on which there are considerable quantities of tie and other timber, which at present cannot be reached.

I also found good agricultural land along the Canadian Pacific Railway, east of Dryden, which has been partly settled upon. The construction of a good trunk road along the right of way for 10 miles would greatly assist in promoting settlement in these sections, and enable the settlers to get their produce to a market.

\$75,000 would be required to cover the cost of these roads.

#### *District of Thunder Bay.*

In the District of Thunder Bay, in the sections tributary to Fort William and Port Arthur, roads have been constructed in different directions leading into the agricultural sections. After these roads reach a few miles beyond the limits of the cities it is difficult to travel over them during several months in the summer season. Many of them have never been graded or ditched, and settlers in the outlying districts find it difficult to get their produce to a market. There is a considerable area of good agricultural land in small sections between Fort William and Pigeon River, but as yet few settlers have located on the land, owing to the fact that it is difficult or almost impossible to reach this land for want of roads. A road has been partly constructed through the Slate River Valley and extending

southerly to the International boundary. It is impossible in the summer season however, to drive over a good portion of this road.

I beg to recommend the reconstruction of this road. I would also recommend that the road from Fort William into the Whitefish Valley be improved and graded. There is a large area of first class land in this valley and in the neighborhood thereof, which would be settled upon if there was one good road to a market. I would also recommend that two other trunk roads, tapping this main road, be constructed through the valley. Also that the old Dawson Road, which was constructed in the early seventies, be improved as far as the Kaministiquia River; also that a trunk road be constructed running north from the said Dawson Road through the township of Gorham; also that the extension of John Street through the township of Oliver and part of the township of McIntyre, be improved; and that the Oliver Road through the township of Oliver and part of the township of McIntyre be improved; that the main road west of Fort William into Slate River Valley be improved; and that a trunk road be constructed through the centre of the townships of Scoble, Gillies, and Lybster.

It will cost \$150,000 to carry out this work.

#### *District of Sudbury.*

I then proceeded to the Sudbury District and examined the different roads constructed tributary to the town of Sudbury and the mining sections. I found that while there is a good section of agricultural land to the west and north of Sudbury, through which roads have already been constructed, it is difficult, owing to the lack of good main roads, for the settlers to get their produce to the most important market in the district.

I beg to recommend that a main road leading West from Sudbury, passing the Murray Mine, and through the agricultural sections in the vicinity of Chelmsford and Larchwood, be improved; and a trunk road opened up north from Azilda, through the townships of Blezzard and Hanmer; also that the Stobi Mine road be extended north; and that the main road from Sudbury north-easterly, known as the Wahnapiatae Lake Road, passing the Garcon Mine, be properly graded. This road passes through a good mining section, as well as a section in which there is considerable land, suitable for agricultural purposes, not yet settled on. I also beg to recommend that the road between Sudbury and Connisan be extended from Connisan easterly along the line of the Canadian Pacific Railway, through Wahnapiatae Station, and continuing easterly towards Markstay. The construction of this road would give to the settlers between Sturgeon Falls and Sudbury access to the town of Sudbury with their produce. Situated as they are at present, it is impossible for them to reach a market.

I would recommend that \$75,000 be expended on these roads.

#### *Shining Tree Roads.*

I also beg to recommend the construction of a wagon road from the Canadian Northern Ontario Railway, commencing about 80 miles north of Sudbury and running in a north-easterly direction to the West Shining Tree gold mining properties, now being developed in the vicinity of West Shining Tree Lake; and to further continue the said road in an easterly direction to the silver mining district on the East Shining Tree Lake, where considerable successful development work has been done. The length of this road would be approximately thirty miles,



through a country where no engineering difficulties will be met with in road construction.

This will not be an expensive road to construct, and I would recommend the expenditure thereon of \$25,000.

This road, besides opening up two very promising mining camps, would later on be of great service in connection with the development of the timber resources in that locality.

#### *District of Algoma.*

On the Sudbury and Sault Ste. Marie road, I would recommend the expenditure of \$50,000 on the Western section of this road.

#### *District of Temiskaming.*

I beg to recommend the construction of trunk and other roads along the main line of the Temiskaming and Northern Ontario Railway, and along the Earleton and Elk Lake and the Charlton branches thereof, extending west as far as the Montreal River, and east for a distance of about 20 miles, through the agricultural lands. Also short roads into the more important mining sections around Gowganda and Swastika.

I estimate that \$75,000 will be required to carry out this work.

I would also recommend the construction of new trunk and other roads along the Temiskaming and Northern Ontario Railway, and the Porcupine branch thereof, and in the townships east and west of the said railway between Matheson and Cochrane, including the cost of grading and improving roads cut out last season.

\$125,000 will be required for these roads.

#### *Northern Part of the Districts of Temiskaming and Algoma.*

From the information gained last season in constructing roads along the Transcontinental Railway, I am convinced that for the next few years, at all events, settlement along this line of railway and throughout the Clay Belt should, as far as possible, be permitted only in the best sections, where the land is most suitable for agricultural purposes; in localities well drained by the larger or main streams tributary to the Moose River; where the land is higher and less subject to summer frosts and requires less drainage; or in sections which have been burnt or partially burnt over, thus reducing the cost of clearing; and where the drainage has been improved by the burning off of the moss.

I, therefore, beg to recommend that first the roads which were cut out and not graded last year (owing to the inclemency of the season) should be graded this season and extended where settlement is most likely to take place. The work of last season in this locality extended east and west from Cochrane, and in a small section adjacent to the Quebec boundary.

In the vicinity of the Groundhog River, one of the eight largest tributaries of the Moose River, it is suggested that a new section be opened up for settlement. There is a very large area of fine agricultural land tributary to this stream, which is about 50 miles west of Cochrane. This area extends south of the Transcontinental Railway for nearly 50 miles, and for about 30 miles North. Twenty or more years ago, fire swept over a very large area along this river, and it is now grown up with a small second growth, and would be much more easily cleared and brought under

cultivation than the land covered with virgin forest. The soil is the usual clay or clay loam, with occasional sections of sandy loam. At the railway crossing there is a considerable clearing where vegetables and hay crops have been grown successfully since railway construction first began.

I beg to recommend the opening up of roads in two townships at this point, and the construction of a trunk road along the right of way for a distance of about 25 miles east and west from the river. The cost of this work, together with the work in the vicinity of Cochrane, and near the Quebec boundary, would amount to about \$150,000.

#### *District of Nipissing.*

At present there is a road between the towns of North Bay and Mattawa, which is passable for winter traffic and for light vehicles during the dry season. It follows in a general course the line of the Canadian Pacific Railway. The road is in bad condition in places, and in other sections the location of the road would require to be changed, in order to avoid bad hills. The distance between North Bay and Mattawa is 46 miles. This road will give to the settlers of the township of Chisholm access to a good market at North Bay or Callander for their farm produce.

I would recommend the expenditure of \$75,000 on this work.

#### *District of Algoma.*

I beg to recommend the expenditure of \$75,000 in the construction of a trunk road along the Transcontinental Railway east and west from the town of Hearst at the junction of the Algoma Central Ontario and the Transcontinental Railways, for a distance of about 25 miles; also the opening up of trunk roads in advance of settlement on the boundaries and centre lines of two townships at this point.

On completion of the Algoma Central Ontario Railway, within probably a year or 18 months, there should be no better point in the Clay Belt to commence a settlement than in the vicinity of this junction and divisional point of the railway. The land is well adapted for agricultural purposes, and owing to its splendid location and easy distance (160 miles) from navigation on Lake Superior, settlers should find an easy market for all the pulp timber on their land. A town of some importance will soon spring up at Hearst, and there seems no reason why the land should not be rapidly settled on if colonization roads are opened in advance of settlement.

#### *Salaries.*

A further sum of approximately \$25,000 will be required to pay the wages of inspectors, engineers, and office staff required to carry out the above works.

I have the honour to be, Sir,

Your obedient servant,

J. F. WHITSON,  
*Road Commissioner.*

*Memorandum* giving the amount recommended to be expended in the construction of Main or Trunk Roads; and the improving by grading or otherwise, of main roads, or roads partially constructed; and also in the construction of a few short roads into sections sparsely settled, where few, if any, roads have as yet been constructed.

1. DISTRICT OF RAINY RIVER.	
Rainy River Valley, trunk and other roads .....	\$100,000 00
2. DISTRICT OF KENORA.	
Trunk roads .....	75,000 00
3. DISTRICT OF THUNDER BAY.	
Trunk roads through the agricultural sections tributary to Port Arthur and Fort William, extending northwest along the Grand Trunk Railway and Canadian Pacific Railway for a distance of 30 miles; and west and southwest for about the same distance; and north-east of Port Arthur for a distance of 15 miles .....	150,000 00
4. DISTRICT OF SUDBURY.	
(a) Trunk roads to the agricultural and mining sections west and north of Sudbury for a distance of 25 miles; and northeast to Wahnapiatae Lake through the mining and agricultural sections and east along the Canadian Pacific Railway, a distance of 25 miles .....	75,000 00
(b) A mining road from a point on the Canadian Northern Railway about 80 miles north of Sudbury, east to the mining districts around East and West Shining Tree Lakes .....	25,000 00
5. DISTRICT OF ALGOMA, AND SAULT STE. MARIE.	
Sections of the Sudbury and Sault Ste. Marie trunk road .....	50,000 00
6. DISTRICT OF TEMISKAMING.	
(a) Trunk and other roads along the main line of the Temiskaming and Northern Ontario Railway, and along the Earleton and Elk Lake, and the Charlton branches thereof; extending west as far as the Montreal River, and east for a distance of about 20 miles, through the agricultural lands; also short roads into the more important mining sections around Gowganda and Swastika .....	75,000 00
(b) New trunk and other roads along the Temiskaming and Northern Ontario Railway, and the Porcupine branch thereof and in the townships east and west of the said railway between Matheson and Cochrane; including the cost of grading and improving roads cut out last season .....	125,000 00
(c) New trunk roads along the Transcontinental Railway, and the grading of roads not completed last season, between the Quebec boundary and a point 60 miles west of Cochrane; in all, a distance of about 130 miles, along the line of the railway, and extending back from the railway from 6 to 12 miles .....	150,000 00
7. DISTRICT OF NIPISSING.	
Trunk road from North Bay to Mattawa, via Callander, and through the township of Chisholm .....	75,000 00
8. DISTRICT OF ALGOMA.	
New trunk roads along the Transcontinental Railway east and west of the town plot of Hearst, at the junction of the Transcontinental and Algoma Central Ontario Railways .....	75,000 00
9. SALARIES.	
For inspectors, engineers, and office staff .....	25,000 00
	<hr/>
	\$1,000,000 00



# REPORT

OF THE

## Minister of Lands, Forests and Mines

OF THE

### PROVINCE OF ONTARIO

For the Year Ending 31st October

# 1913

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PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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# CONTENTS.

## Appendices:

	PAGE
No. 1. Statement of Officers and Clerks in the Department .....	2
2. " Crown Lands Agents and Homestead Inspectors .....	5
3. " Lands sold and Leased and Collections .....	7
4. " Gross Revenue .....	8
5. " Receipts Considered as Special Funds .....	9
6. " Gross Disbursements .....	10
7. " Expenditure on Account of Various Services .....	33
8. " Revenue from Woods and Forests .....	34
9. " Patents, etc., Issued .....	35
10. " Timber Cut and Amounts Accruing for Dues, etc. ....	36
11. " Work Done in Military Branch .....	38
12. " Letters Received and Mailed .....	38
13. " Locations, etc., under Free Grants Act .....	39
14. " Municipal Surveys Ordered .....	44
15. " Municipal Surveys Confirmed .....	45
16. " Crown Surveys in Progress .....	47
17. " Crown Surveys Completed .....	48
18. Surveyor's Report, base and meridian lines, District of Algoma and Thunder Bay .....	50
19. " Township Outlines, District of Algoma .....	53
20. " " " " .....	57
21. " " " " .....	59
22. " " " Sudbury .....	61
23. " Township of Henvey, District of Parry Sound ....	64
23a. " Piece of Land West of Mowat and South of the Hen- vey Inlet Indian Reserve .....	65
24. " Township of Mulloy, District of Algoma .....	66
25. " Southerly Eight Concessions, Township of Hanlan, District of Algoma .....	69
26. " Southern portion, Township of Casgrain, District of Algoma .....	70
27. " Township of Stoddart, District of Algoma .....	72
28. " Township of Studholme " .....	74
29. " Township of Shackleton, District of Temiscaming .	77
30. " Township of Sargeant, " .....	78
31. " Township of Fauquier, " .....	80
32. " Hay Bay, Township of Fredericksburg, County of Lennox and Addington .....	81
33. " Cache Lake, Township of Canisbay .....	84
34. " Dawson Road lots, District of Thunder Bay .....	86
35. " Parts of the Townships of Blake and Crooks, District of Thunder Bay .....	88
36. " Township of Mathieu, District of Rainy River .....	90
37. Report of Superintendent Algonquin Provincial Park .....	92
38. Report of Forestry Branch .....	95
39. Supplementary List of Licensed Cullers .....	102
40. Making Square Timber (Illustrations) .....	103
41. Report of J. F. Whitson on Construction of Roads in Northern Ontario..	118





# Report of the Minister of Lands, Forests and Mines of the Province of Ontario

For the Year ending 31st October, 1913

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To His Honour THE HONOURABLE SIR JOHN MORISON GIBSON, K.C.M.G.,  
*Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit for the information of your Honour and the Legislative Assembly a report for the fiscal year ending 31st October, 1913, of the management of the Crown Lands of the Province.

## CLERGY LANDS.

The area sold during the year was 181 acres, the value of which was \$424.57. The collection on account of Clergy Lands was \$1,284.38. (See Appendix No. 3, page 7.)

## COMMON SCHOOL LANDS.

There were no sales. The collection on account of former sales was \$4,363.63. (See Appendix No. 3, page 7.)

## GRAMMAR SCHOOL LANDS.

The area sold during the year was 121 acres, for \$542.25. The collection on account of these and former sales was \$729.90. (See Appendix No. 3, page 7.)

## UNIVERSITY LANDS.

The area of these lands sold during the year was 10,484 acres for \$6,766.47. The collection on account of these and former sales was \$3,356.72. (See Appendix No. 3, page 7.)

## CROWN LANDS.

There was sold during the year for agricultural and town site areas 202,088 acres for \$151,840.93. The collection on account of these and former sales was \$118,134.60. There was sold for mining purposes 34,375 acres for \$89,161.28. There was collected on account of these and former sales \$95,068.94.

There was leased for mining purposes 9,313 acres for \$9,313.24. There was collected on account of these leases and those of former years \$20,878.43. There was leased of Crown Lands an area of 4,309 acres for \$1,908.14. There was collected on account of these and the leases of former years \$18,348.05.

The total area of Crown Lands disposed of by sale and lease during the year was 260,873 acres for a value of \$259,956.88. The total collection on account of the sales, leases, etc., was \$262,164.65. (See Appendix No. 3, page 7.)

The Temiskaming region, covering by that expression the country lying between Haileybury and Cochrane, has had a considerable influx of settlers during the past year.

In the New Liskeard agency 239 settlers purchased 32,083 acres of land. In the Englehart Agency 112 settlers purchased 17,246 acres of land. In the Matheson Agency 385 settlers purchased 58,317 acres of land. In the Cochrane Agency 285 settlers purchased 42,683 acres of land, and in the Hearst Agency, recently opened, 63 settlers purchased 8,224 acres of land. Altogether in that region 1,084 settlers purchased 158,553 acres of land. In other parts of the Province 137 settlers purchased 18,130 acres of land.

When the Transcontinental Railway is in regular operation, a time table established and reliable freightage at reasonable rates secured, people will move into that country in large numbers. At present the country is handicapped by uncertain communication and heavy charges. The progress of that country, too, particularly in the Clay Belt, will measurably depend upon the developments that take place there. The land, of course, is intended for actual settlers. The class of people who will probably go in there will not be men of large capital and will have to depend in the future on local markets for what they have to sell, whether it be agricultural products or timber, and also for employment during the winter season. The Abitibi Pulp and Paper Company is rapidly completing a development which will give good markets and employment to a large number of people. This company will have a probable output of 250 tons of news print per day. They intend erecting this summer 75 houses for their workmen, which will give them altogether from 200 to 250 houses. They have laid out their town site and are putting in sewers and a water system. It is expected that their mill will be running some time in June and ready to turn out pulp commercially by the 1st of July. They have taken out about 40,000 cords of pulpwood this winter and when they are in full running order will require 90,000 cords for their paper mill. It will be seen from this what an important industry they are creating, and it is obvious how such a development will assist in opening up that region.

The New Ontario Colonization Company is pressing forward their development by the building of roads and the erection of houses, and are, in other ways, making preparations to promote settlement on a considerable scale.

The Department has advertised for sale another pulp concession situated on the Metagami River on which development on a large scale is expected. Other developments of a similar character may be expected in the near future, and as soon as the Transcontinental is running and reasonable freights obtained, outside buyers of pulpwood will come in and widen out the market for settlers' timber.

The completion of the Algoma Central Railway to Hearst on the line of the Transcontinental will give a new outlet and inlet from Sault Ste. Marie and the large pulp mills at that place will be purchasers along the line of the Transcontinental of supplies for their mills.

The Department is preparing the way for settlement by the construction of roads which will enable settlers to get to their lands without delay or hardship. There exists in the Clay Belt a vast region of enormous possibilities waiting for proper facilities for travel to become densely settled with prosperous people. It would be folly to attempt to bring large numbers into that region before it was properly opened up by railway and markets and employment available. It is better to make haste slowly than to have any setback later on.

## FREE GRANTS.

Throughout the year practically 2,000 settlers located and purchased Free Grant lands to the extent of 240,000 acres, the greater areas having been taken up in the northern part of the Province. In the Districts of Thunder Bay and Rainy River along over 800 homesteaders were allotted lands; while in Dryden and Kenora Agencies nearly 200 took up Crown Lands subject to Free Grant regulations. In the older parts of the Province generally speaking there was a greater demand for Free Grant land, and the number of settlers exceeded the previous year by over 100. During the year 828 locatees completed their settlement duties and obtained their patents.

The only townships appropriated during the year ending 31st October, 1913, for Free Grant purposes were Henvey in the Parry Sound District and part of McClintock in the Provisional County of Haliburton.

## MILITARY GRANTS.

The total number of military certificates issued to date, under the Veterans Land Grant Act, 1 Edward VII., cap. 6, is 13998.

During the year there have been 146 certificates located, making in all a total of 8,017 located.

There were 9 certificates surrendered to the Crown for the \$50.00 commutation, this makes a total of 3,226 certificates surrendered.

In 34 cases the certificates have been surrendered and applied in payment of lands purchased from the Crown making a total of 702 that have been applied in this manner.

During the year there have been 844 patents issued for lands located by veterans making a total of 6,405 thus disposed of.

The total number, therefore, of certificates that have now been redeemed is 11,945 leaving 1,953 still outstanding.

The locatees of all lands granted under this Act, must apply for their patents for such land before ten years have expired from date of location. If this application for patent is not made within the ten years, then the land comes under the settlement regulations, and unless the settlement duties are proceeded with, the locations are liable to cancellation.

## THE MINERAL INDUSTRY.

The mineral production of Ontario in 1913 had a total value of \$53,207,311, the largest yet recorded in any year. Of this \$37,507,935 was of metallic, and \$15,699,376 of non-metallic substances. The increase over the output for 1912 was \$4,865,699, or more than 10 per cent.

## METALS.

*Gold.*—There were 16 producing gold mines in 1913, 7 of which were in Porcupine, and 9 elsewhere. The Porcupine mines yielded 207,583 ounces of gold, or more than 94 per cent. of the whole production. Hollinger crushed 138,291 tons of ore for a yield of 118,558 ounces, the average contents recovered per ton for the year being .857 oz. At the Dome 131,149 tons were treated and 59,912 ounces of gold obtained, the average recovery per ton being .456 ounce.



The mill at the Dome mine is being enlarged and its capacity increased from 40 to 80 stamps. The completed mill is expected to be in operation during the spring of 1914. There were 5 other producers at Porcupine, the principal of which were Porcupine Crown and McIntyre-Porcupine. In their combined operations they treated 53,705 tons of ore, which turned out 29,093 ounces of gold, or an average yield per ton of .541 oz.

From the other gold districts, the production was as follows: Kirkland Lake and Swastika, 4,183 ounces, Long Lake, 5,879 ounces, Larder Lake, 700 ounces, Eastern Ontario, 1,065 ounces, and Northwestern Ontario, 1,262 ounces.

Much attention is being given to Kirkland Lake, where is situated the Tough-Oakes mine. From this property 101,049 tons of selected ore were shipped, which contained a gross value of \$46,685 or \$462 per ton. In addition 1,975 tons of lower grade material were put through a small stamp mill and \$26,232.31 in gold recovered, or \$13.28 per ton.

*Silver.*—The production at Cobalt was a little less than in 1912, being 29,681,975 fine ounces as against 30,243,859—a decrease of 561,884 ounces, or 1.85 per cent. High-water mark in this camp was apparently reached in 1911, when the yield was 31,507,791 ounces. The process of decline is proving more gradual than did that of increase, the falling-off in two years being only 5.7 per cent. The price of silver last year was lower than in 1912, the average in New York for the twelve months being 59.791 cents per fine ounce as compared with 60.835 cents. The result was to reduce the return to the mining companies by \$853,934, the value of the output being \$16,555,001.

To obtain the total yield of silver, there should be added to the Cobalt output 42,956 ounces recovered from the auriferous ores of Porcupine and the other gold camps.

It is now ten years since the silver deposits of Cobalt began to be worked, and up to the end of 1913, their total yield had a value of over 98 millions of dollars, the record in detail being as follows:—

Year	Ounces	Value
		\$
1904.....	206,875	111,887
1905.....	2,451,356	1,360,503
1906.....	5,401,766	3,667,551
1907.....	10,023,311	6,155,391
1908.....	19,437,875	9,133,378
1909.....	25,897,825	12,461,576
1910.....	30,645,181	15,478,047
1911.....	31,507,791	15,953,847
1912.....	30,243,859	17,408,935
1913.....	29,681,975	16,555,001
	185,497,814	98,286,116

The life of the camp is being prolonged by the discovery of new veins; by the drainage of lakes so as to permit a more complete recovery of the deposits underlying them, and by an increasingly extensive concentration of low grade ore. Important veins were found last year when Kerr Lake was drained, and a promising find was made in February, 1914, on the old Kerry lease in the bed of Peterson Lake; the drainage of Cobalt Lake is about to be begun; and a new 80-stamp concentration plant has been built to take the place of the Northern

Custom plant sold to an English syndicate which has taken over the Cobalt Town-site and other mines.

Of the whole production of silver, 28,105,505 ounces came from the mines of Cobalt proper, the yield from the outlying camps being as follows:

Gowganda:—	oz.	oz.
Miller-Lake O'Brien.....	469,923	
Mann.....	32,447	
		502,370
South Lorrain:—		
Wettlaufer-Lorrain .....		248,992
Casey:—		
Casey Cobalt.....		825,108
Total.....		1,576,470

*Nickel.*—The quantity of ore smelted at the nickel-copper works in 1913, was 823,403 tons, which produced 47,150 tons of bessemerized matte. The nickel contents amounted to 24,838 tons, valued in the matte at \$5,237,477. In 1912, the production was 22,421 tons worth \$4,722,040, the increase being therefore a little under 11 per cent.

The operating companies are the Canadian Copper Company, and the Mond Nickel Company. Of the ore treated by the former, 418,525 tons were taken from the Creighton mine, 54,646 from Crean Hill, 56,439 from No. 2, and 86,665 from No. 3. The last mentioned mine is also known as the Frood. The Mond Company's ore was derived as follows: from the Garson mine, 113,403 tons, from Victoria No. 1, 38,592 tons, from North Star, 11,294 tons, and from Worthington, 537 tons. This company also received and smelted 4,596 tons of ore from the Alexo mine in the township of Dundonald, on the line of the T. & N. O. railway, the product of which is similar in character to that of the Sudbury mines. The Mond company during the year removed their smelting plant from Victoria Mines to Coniston, some eight miles east of Sudbury, where they have erected a complete and well-equipped plant. The British America Nickel Corporation have acquired the holdings of the old Dominion Nickel-Copper Company, and are developing the Murray and Whistle mines. They raised no ore during the year.

The satisfactory results obtained by diamond drilling at the Murray, Frood, Garson, Levack and other properties, disclosing as they have, immense reserves of ore, have established nickel mining in Ontario on an assured basis.

*Copper.*—The mattes produced at the Sudbury nickel-copper smelters furnished the only copper obtained in 1913, save for about 3 tons which accompanied some concentrates shipped from the Temiskaming silver mine, Cobalt. The quantity was 12,941 tons, valued in the matte at \$1,840,492. This compares with 11,126 tons in 1912, worth \$1,584,310, an increase of about 16 per cent. The percentage of the copper to the nickel in the Sudbury mattes last year was a little over 1 to 2.

*Iron Ore and Pig Iron.*—There were shipped from the iron mines of the Province last year 195,937 tons valued at \$424,072. Of this quantity 165,454 tons were of ore as taken from the mine, the remaining 30,483 tons were composed of 22,327 tons of roasted siderite from the Magpie mine, 4,841 tons of concentrates from the Trenton plant of the Canada Iron Mines, and 3,315 tons of briquettes from the Gröndal magnetic concentrating works at Moose Mountain. The latter mine, it is stated, will be in a position to ship 200,000 tons to the United States market in 1914. At the Magpie mine the Algoma Steel Corporation are enlarging

the capacity of the roasting plant which was erected to treat the siderite ore of which that deposit is composed.

The output of pig iron continues to grow, the product of the furnaces being 648,899 tons in 1913, worth \$8,719,892, as against 589,593 tons in 1912, valued at \$8,054,369—an increase of 10 per cent. in quantity and 8 per cent. in value. There are now eleven blast furnaces in the Province; of these only one, that of the Atikokan Iron Company at Port Arthur, was not in operation in 1913. During the year two new furnaces were blown in—one by the Canadian Furnace Company, Port Colborne, and the other by the Standard Iron Company at Parry Sound. The last named uses charcoal as fuel.

#### NON-METALS.

The output of non-metallic products showed a gain over 1912 of over 25 per cent.

The increase was general throughout the list. Out of 24 products, four showed a decrease aggregating \$162,163, while the remaining 20 increased by \$2,319,679.

The largest falling off was in corundum, \$96,176; quartz receded by \$48,716, arsenic by \$15,151, and mica by \$2,120.

On the other hand, Portland cement advanced by \$739,805, pressed brick by \$237,122, stone by \$183,314, natural gas by \$68,999, sewer pipe by \$135,670, common brick by \$274,102, iron pyrites by \$100,644, etc. Three of the Canada Cement Company's plants were shut down about the beginning of 1914, and will not likely be opened again this year.

Sand and gravel, of which statistics were collected for the first time, show a production valued at \$233,567.

It is noteworthy that although the output of petroleum continues to decline—the reduction in 1913 as compared with 1912 being 516,969 gallons—the value was greater by \$53,514.

Construction materials, as a whole, including brick of all kinds, lime, stone and cement, had an increased production of \$1,512,845, or 7.3 per cent., as follows:

Product	1912	1913
	\$	\$
Bricks.....	4,034,405	4,615,212
Lime.....	381,672	390,600
Stone.....	953,839	1,137,153
Cement.....	3,365,659	4,105,455
Total.....	8,735,575	10,248,420

#### NOTES.

*Water Power.*—The mines and metallurgical plants of northern Ontario are now for the most part operated by electricity generated by water powers. This is true of Cobalt, where falls and rapids on the Montreal and Matabitchewan rivers are utilized; of Sudbury, where the mines and smelters are supplied with power by the Spanish, Wahnapiatae and Vermilion rivers; of Porcupine, to which power is conducted from the Mattagami; of Michipicoten, where the Michipicoten and Mag-



pie hoist the ore and operate the machinery at the Helen and Magpie mines; of the Canadian Exploration Company's gold mine at Long Lake, and of others. A new water power installation is being put in at Gowganda Lake to operate the Miller-Lake O'Brien silver mine, and a transmission line is under construction from the Blanche river at Charlton to work the gold properties in the new field at Kirkland lake. Water powers are numerous in northern Ontario, and, as at Iroquois Falls on the Abitibi river, are employed also to operate pulp and paper mills. They have been of great service to the mining industry in providing cheap power.

#### COLLECTIONS.

The total revenue of the Department from all sources was \$2,793,809.87. Of this \$118,134.60 came from agricultural and town sites; mining lands \$95,068.94; mining and crown leases \$39,226.48; miners' licenses, permits and recording fees \$93,256.10; royalties \$200,333.01; supplementary revenue tax \$211,063.84. From woods and forests the revenue was \$1,979,125.81, made up of the following items, bonus \$591,675.29; timber dues \$1,277,490.08; ground rent \$99,460.19; transfer fees \$10,500.25. (See Appendix No. 4, page 8.)

#### DISBURSEMENTS.

The total expenditure of the Department for ordinary services was \$696,051.63. Some of the principal items were: Agents' salaries and disbursements \$15,812.69; homestead inspectors \$11,127.96; Crown timber agents \$30,537.69; wood ranging and estimation of timber \$94,697.40; fire ranging \$145,500.81; forest reserves, fire ranging, etc., Temagami reserve \$46,326.93, Metagami reserve \$8,882.88, Mississauga reserve \$12,680.63, Nipigon reserve \$12,264.73, Eastern reserve \$2,941.56, Quetico reserve \$4,077.00; mines and mining \$37,553.94; mining recorders \$26,304.75; surveys \$89,123.51; refunds \$13,986.24; contingencies, lands and forests \$20,375.89, bureau of mines \$12,258.13.

There was expended under the direction of the Department the sum of \$1,120,471.60. Of this amount, \$1,081,172.28 was in connection with the northern development, under 2 Geo. V, while the other principal items were, Algonquin Park \$21,554.09, exploration party in new territory, \$2,932.64, and expenditure under Bounty Act 7 Edward VII., cap. 14, \$14,362.59. (See Appendix Nos. 6 and 7, pages 10 to 33.)

#### WOODS AND FORESTS.

The total revenue accrued for the year ending the 31st of October, 1913, from woods and forests was \$2,127,222.56—an increase of \$59.162 over last year. The revenue collected during the year from the same source amounted to \$1,979,125.81, which is only about \$6,000 less than the collection of last year; and last year was somewhat of a record year, as the revenue collected exceeded that of the previous year by \$274,000. The revenue derived from timber dues was \$1,277,490.08 as against the collection of \$1,339,957.12 for last year. The collection on account of bonus was \$591,676.29 as against the collection of \$540,702.85 for last year. The collection on account of ground rent was \$99,460.19 as against \$96,262 for last year. The collection on account to transfer bonus was \$10,500 as against \$8,740 for last year.

The area under timber license for the season of 1913 was 17,519½ miles as against 18,410 miles for last year. The area under license fluctuates from year to



year for the following reasons: Areas are cut out and surrendered by the licensees and there are other areas on which the ground rent is not paid and the license does not issue. There was surrendered this year 257 miles and new licenses were issued for areas sold during the year amounting to about 100 miles. The output of pine sawlogs, booms and square timber in feet board measure was 360,377,168 feet board measure, which is 127,661,498 feet board measure below the output of last year. The output of timber other than pine was 64,497,036 feet board measure as against 69,373,572 feet board measure for last year. The quantity of pulpwood taken out from Crown Lands was 131,434 cords as against 140,338 cords for last year. There were 6,355,828 pieces of railway ties taken out this year as against 5,704,559 for last year, or an increase of 651,269 ties over the output for last year. It will be seen that, as was expected, the output of all kinds of timber was considerably below the output of last year, except railway ties. The great scarcity of money compelled a number of lumbermen to shorten up their operations, while others did not operate at all. It is not expected that there will be much increase in the cutting of the present winter as the financial stringency has not entirely ceased.

During the year the pine timber in the Townships of Thistle and McWilliams tributary to Lake Nipissing was offered for sale by public tender. The Department had careful examinations made of the Townships which showed that a large percentage of the timber in them was mature and that the large timber was very faulty. There was a request from the Ontario Pulp Company to be allowed to get a part of its supply in these townships, and there was the danger of fire owing to the construction of the Canadian Northern Railway in the neighborhood. Under these circumstances it was considered advisable to offer the timber for sale, and it was accordingly sold, subject to an increase in ground rent from \$5 to \$10 per mile, and an increase in the timber dues from \$2 per thousand to \$5 per thousand, and the important condition was put in that no trees of a less diameter than 12 inches on the stump 2 feet from the ground should be cut. The increase of the ground rent and timber dues was a substantial one and the conditions prohibiting the cutting of small trees were new. The amount realized from the sale was \$147,500 or an average per acre of about \$3 with \$5 per thousand to be paid when the timber is cut.

#### FIRERANGING.

The fireranging service during the summer was composed of 217 rangers in forest reserves, 208 on railways, and 114 on lands of the Crown. There were 34 chief rangers including the services of the Crown Timber Agents; 4 assistant chief rangers, and 8 supervising rangers on licensed lands, making a total of 585 men. The timber licensees had on their various limits 350 rangers, so that the total staff of firerangers on duty last year was 935 men. There were no serious fires during the past season on lands of the Crown except in the Township of Dana, and there the timber damaged was disposed of and will be cut this winter. On licensed territory the Georgian Bay Lumber Company had some timber burnt by locomotives of the Canadian Pacific Railway, and on the Booth limits tributary to the Mattawa River some timber was damaged in the course of railway construction. These are the only fires of any consequence which occurred on lands of the Crown or licensed territory during the present year.

## FOREST RESERVES.

The Temagami Forest Reserve had a staff of 137 firerangers under 4 chiefs. The area of this reserve is about 6,000 miles. There being a large quantity of timber in the reserve it is necessary that it should be very closely guarded. There have been no fires in the reserve during the past year.

The Mississauga Reserve contains an area of about 3,000 miles. There is a large quantity of first-class pine in this Reserve. There has been a staff of 32 rangers in this Reserve during the past summer under a chief ranger. The territory has been efficiently patrolled and no fires have occurred.

The Nepigon Reserve is the largest Reserve in the Province, having an area of 7,300 miles. It is not a pine country but there are large quantities of pulpwood in it. Two railways are being built through it and it is a popular fishing resort. It therefore requires to be closely ranged. We had 20 rangers on duty in this Reserve in addition to those on railway construction where railways are being built through it.

The Quetico Reserve is situated in the Rainy River District lying along the boundary line between Canada and the United States. It contains an area of 1,500 miles and there is a large quantity of pine in it. It is away from settlement and is therefore not in so much danger from fire. There were 14 firerangers in this Reserve last year in charge of Mr. Crown Timber Agent Watts. No fires occurred. The changing of this Reserve into a park so as to give better protection to the game is under consideration.

The Eastern Reserve is situated in the County of Addington and has an area of 100 square miles. The timber in this Reserve is stated to be growing up very rapidly. There were no fires in it during the past year and it was protected by a chief ranger with 6 rangers under him.

What is called the Sibley Reserve contains an area of 70 miles and it covers the promontory called Thunder Cape at the entrance of Thunder Bay. No fires have occurred in this Reserve.

The Algonquin National Park has an area of 2,741 miles. Ten firerangers in addition to the ordinary park rangers were on duty there during last summer. Owing to the construction of the Canadian Northern Railway through the Park it became necessary to give it better protection.

Rondeau Park. This Park was formerly administered by this Department, but by Order in Council of May, 1913, it was transferred to the Public Works Department, and it is now controlled by that Department.

## RAILWAYS.

Full staffs of rangers have been on duty on the different railways. On the Temiskaming and Northern Ontario Railway there have been 58 rangers on duty under 3 superintendents; on the Transcontinental Railway 64 rangers under 3 chiefs; on the Canadian Northern 86 rangers under 5 chiefs, and on the Algoma Central Railway 26 rangers under 2 chiefs.

No serious fires occurred along any of the railways except as before stated in the Township of Wood on the Canadian Pacific Railway and along the construction of the Canadian Northern in the Township of Dana and on the Booth limits tributary to the Mattawa River.

The expenditure on fireranging for the past year has been as follows:

On Crown Lands .....	\$65,000.00
On Railways . . . . .	80,000.00
On Forest Reserves .....	88,000.00

#### CULLERS' EXAMINATIONS.

Cullers' examinations were held at North Bay and Kenora. Fifteen candidates were successful at these examinations and were granted certificates authorizing them to act as cullers.

(For list of cullers who passed at the above examinations see Appendix 39 page (102.)

(For complete list of licensed cullers see Minister's reports for 1911 and 1912.)

#### CROWN SURVEYS.

The following Crown Surveys have been undertaken this year:

Instructions were given for the subdivision of the following townships:

Township of Lowther, in the District of Algoma.

Township of Scholfield, in the District of Algoma.

Township of Caithness, in the District of Algoma.

Township of Talbott, in the District of Algoma.

Township of Orkney, in the District of Algoma.

Township of Shetland, in the District of Algoma.

Township of Ebbs, in the District of Algoma.

Township of Sterling, in the District of Thunder Bay.

Township of O'Brien, in the District of Timiskaming.

Township of Malachi, in the District of Kenora.

Also outlines of townships in the District of Sudbury.

Outlines of townships in the District of Kenora.

Outlines of townships in the District of Kenora.

Timber Berths in the District of Kenora.

Timber Berths in the District of Kenora.

Certain lands adjoining the townships of MacGregor, Gorham and Ware, District of Thunder Bay.

Survey of Cache Lake, township of Canisbay, in the Algonquin National Park.

Inspection of surveys.

The report of the surveyors, so far as received and examined, will be found in appendices 18 to 36 inclusive, pages 50 to 91 inclusive.

#### MUNICIPAL SURVEYS.

On the petition of the Municipal Council of the township of Hinchinbrooke, instructions were issued to survey the line between concessions 7 and 8 from lots 9 to 13, in the township of Hinchinbrooke, or as much farther on each side as an original post can be found.

Also on a petition of the Municipal Council of the township of Toronto, instructions were issued to survey the allowance for road between the 1st and 2nd ranges, Credit Indian Reserve, south of Dundas Street, township of Toronto, from the north-west angle of lot No. 8, 1st range, across lots Nos. 9, 10, 11, 12, 13 and 14 in the 1st range, and lots Nos. 6, 9 and 10 in the 2nd range, Credit Indian



Reserve, and thence along the road allowance between the 2nd range, Credit Indian Reserve, and the 2nd Concession of Toronto Township south of Dundas Street, being across part of lot 22, lot 23, lot 24 and lot 25 in the 2nd concession south of Dundas Street, to the westerly limit of said lot 25, being the easterly limit of the allowance for road between lots Nos. 25 and 26, known as the "Lorne Park Road" and as regards the 2nd range on the northerly side of said road allowance being across parts of lots numbers 10, 11 and 12 and part of lot 13 in the 2nd range, Credit Indian Reserve, and to define said allowance for road by permanent stone or iron monuments planted on each side thereof.

The following municipal surveys have been confirmed under the provisions of the revised Statutes of Ontario, 1897, Chapter 181, Sections 14 and 15, such surveys being final and conclusive.

To survey certain concessions, road allowances, etc., formerly in the township of Barton, now in the city of Hamilton as follows: Barton Street from Sherman Ave. to the allowance for road between lots Nos. 2 and 3 of the township of Barton now in the City of Hamilton. Main Street from Sherman Ave. to Ottawa Street. The allowance for road between the 3rd and 4th concessions of Barton now in the city of Hamilton from Ottawa Street westerly to the city limits. Sherman Ave. from the brow of the mountain northerly to the base line. Trolley Street from the brow of the mountain northerly to Burlington Bay. Ottawa Street from the brow of the mountain northerly to Burlington Bay. Allowance for road between lots 2 and 3 from the City of Hamilton water works pipe line to Barton St. and to plant durable monuments at the front and rear of the said portions of the concessions and allowances for road between lots in the city of Hamilton, and at the front and rear angles of the lots therein, also to plant durable monuments at the front and rear of the following portions of concessions and allowances for road between lots in the city of Hamilton, and at the front and rear angles of the lots therein—from the eastern limit of Lakeview Ave. to the head of the Strongman Mountain Road. From Bay Street to allowance for road between lots 20 and 21 known as Paradise Road. Paradise Road from Aberdeen Ave. to Marsh known as Coots Paradise.

Also to survey the line between concessions 7 and 8 from lots 9 to 13, in the township of Hinchinbrooke, or as much farther on each side as an original post can be found.

Also to survey the boundary line between the townships of Montague and Beckwith, in the County of Lanark, and to plant stone and other durable monuments on each side of the road allowance in such positions as shall define the true boundary between the said townships.

Particulars relating to these surveys will be found in Appendices 14 and 15, pages 44 and 45.

W. H. HEARST,

Minister.

Department of Lands, Forests and Mines,  
Toronto, October 31st, 1913.





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# APPENDICES

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## Appendix No. 1.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1913.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
	Hon. W. H. Hearst	Minister	1911, Oct. 12	\$ 6,000 00	
	Aubrey White	Deputy Minister	1882, Jan. 1	4,200 00	
	Geo. Kennedy	Law Clerk	1872, Feb. 1	2,800 00	
	C. C. Hele	Minister's Secretary	1912, Jan. 23	1,700 00	
	E. S. Williamson	Secretary to Department	1889, May 1	1,900 00	
	Janet Garvie	Clerk	1905, Jan. 1	800 00	
	James Farrington	Stenographer	1910, Dec. 14	700 00	
	J. J. Murphy	Chief Clerk	1872, May 1	2,250 00	
	Walter C. Cain	Clerk	1903, March 6	1,650 00	
	W. R. Ledger	do	1894, Feb. 5	1,350 00	
	Selby Draper	do	1903, Jan. 1	1,300 00	
	S. A. Platt	do	1907, March 13	1,100 00	
	F. Lucas	do	1909, March 24	1,050 00	
	F. Samuels	do	1909, March 24	875 00	
	W. B. Baines	do	1912, Oct. 5	850 00	
	May Bengough	Stenographer	1896, Oct. 23	725 00	
	Jean C. Oram	do	1907, Jan. 16	700 00	
	Nan McQueen	do	1909, March 24	700 00	
	H. E. Johnston	Chief Clerk	1907, March 13	1,500 00	
	E. F. O'Neil	Stenographer	1904, Nov. 9	700 00	
	G. B. Kirkpatrick	Director of Surveys	1866, Jan. 30	2,700 00	
	L. V. Rorke	Surveyor and Draughtsman	1909, May 1	2,500 00	
	James Hutcheon	Ass't Surveyor & Draughtsm'n	1913, May 20	2,100 00	
	W. F. Lewis	Clerk	1872, May 5	1,350 00	
	D. G. Boyd	Draughtsman	1897, Sept. 27	1,550 00	
	E. M. Jarvis	Clerk	1904, Oct. 19	1,300 00	
	J. B. Proctor	do	1897, Jan. 15	1,150 00	
	H. Treeby	Draughtsman	1904, Jan. 13	1,200 00	
	John Work	do	1911, March 3	1,150 00	
	F. E. Blanchet	do	1907, March 13	1,050 00	
	A. Leaman	do	1909, March 24	1,050 00	
	B. Rushford	do	1912, Oct. 5	1,000 00	

Sales and Free Grants

Military Grants

Surveys

	M. H. Kirkland .....	Stenographer .....	1904, Nov. 23 ...	700 00
	E. G. Halliday .....	do .....	1909, March 24 ..	700 00
	E. C. Armer .....	do .....	1911, March 3 ..	600 00
	B. Benson .....	do .....	1911, March 3 ..	600 00
	C. O'Connor .....	do .....	1911, March 3 ..	600 00
	C. S. Jones .....	Chief Clerk .....	1890, May 22 ....	2,000 00
	C. E. Burns .....	Clerk .....	1900, April 9 ....	1,400 00
	W. S. Sutherland .....	do .....	1902, Jan. 13 ....	1,300 00
Patents .....	W. Carrell .....	do .....	1904, Jan. 15 ....	1,200 00
	A. E. Robillard .....	do .....	1894, May 8 ....	1,000 00
	A. E. Roe .....	do .....	1909, March 24 ..	1,150 00
	J. A. G. Crozier .....	Chief Clerk .....	1867, Dec. 1 .....	2,250 00
Woods and Forests.....	J. B. Cook .....	Clerk .....	1898, Aug. 1 .....	1,650 00
	H. Gillard .....	do .....	1900, April 9 ....	1,450 00
	F. J. Niven .....	do .....	1903, March 6 ..	1,250 00
	W. F. Trivett .....	do .....	1904, Jan. 13 ....	1,200 00
	R. H. Hodgson .....	do .....	1904, Nov. 23 ....	1,150 00
	J. Houser .....	do .....	1907, March 13 ..	1,250 00
	A. H. O'Neil .....	do .....	1908, March 24 ..	950 00
	G. W. Harris .....	do .....	1909, March 24 ..	950 00
	N. L. Rogers .....	do .....	1911, Nov. 1 .....	900 00
	S. D. Meeking .....	do .....	1910, June 1 .....	850 00
	A. P. Saunders .....	do .....	1913, April 30 ..	800 00
	Amy Thompson .....	Stenographer .....	1909, March 24 ..	750 00
	M. E. Bliss .....	do .....	1909, Sept. 1 .....	650 00
	D. G. Ross .....	Accountant .....	1861, April 15 ....	2,450 00
	H. M. Lount .....	Clerk .....	1904, Jan. 13 ....	1,500 00
	C. J. Clarke .....	do .....	1907, March 13 ..	1,100 00
Accounts.....	R. Gordon .....	do .....	1913, April 30 ..	800 00
	C. Bowland .....	Clerk and Stenographer .....	1911, March 3 ..	675 00
	Frank Yeigh .....	Registrar .....	1880, March 1 ....	1,550 00
	Chester Dies .....	Clerk .....	1907, March 13 ..	1,150 00
Forestry .....	E. J. Zavitz .....	Director .....	1912, Nov. 7 .....	2,500 00
	F. S. Newman .....	Assistant Director .....	1913, Sept. 22 ....	1,600 00
Bureau of Mines	Thos. W. Gibson .....	Deputy Minister .....	1891, June 19 .....	3,800 00
	R. D. Fisher .....	Secretary .....	1907, March 13 ..	1,250 00
	W. H. Morris .....	Clerk .....	1906, Jan. 1 .....	1,100 00



## Appendix No. 1.—Concluded.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st. 1913.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
Bureau of Mines	W. Lemoine	Clerk	1908, April 8	\$ 1,100 00	c.
	A. Burritt	do	1908, April 8	1,100 00	
	D. H. Barr	do	1907, March 13	1,100 00	
	Anne Moffatt	do	1901, March 1	1,050 00	
	A. G. Scovell	do	1909, March 24	1,000 00	
	J. W. St. John	do	1910, April 14	950 00	
	Ethel Craig	Clerk and Stenographer	1906, May 16	775 00	
	Flossie McDougall	do	1907, March 13	700 00	
	J. L. McNaughton	Stenographer	1909, March 24	725 00	
	H. W. Batchelor	do	1911, Dec. 19	600 00	
	H. Brophy	Messenger	1898, Oct. 1	875 00	

D GEO. ROSS,

Accountant.

AUBREY WHITE,

Deputy Minister of Lands and Forests.

## Appendix No. 2.

## List of Land Agents and Homestead Inspectors for the year ending October 31st, 1913.

Name.	Post office address.	District or county.	Date of appointment.	Salary per annum.	Remarks.
Anderson, T. V. ....	Hearst .....	Part of District of Algoma .....	1913, May 9 ..	\$ 500 00	
Baker, R. H. ....	Minden .....	Part of Victoria .....	1907, Oct. 1 ..	350 00	
Barr, Jas. ....	Fort Frances .....	Homestead Inspector .....	1906, Nov. 23 ..	1,200 00	
Bastien, J. A. ....	Chelmsford .....	do .....	1913, May 2 ..	600 00	
Bolger, J. W. ....	New Liskeard .....	Lake Temiskaming, District of Nipissing ..	1913, July 17 ..	500 00	
Both, Chas. ....	Denbigh .....	Part of Frontenac and Addington .....	1905, Oct. 20 ..	100 00	
Brown, J. B. ....	Bracebridge .....	Homestead Inspector and Crown Land Agent ..	1905, July 28 ..	900 00	
Byers, R. J. ....	Massey .....	Part District of Sudbury .....	1905, July 3 ..	500 00	
Buchanan, T. ....	Thessalon .....	do .....	1901, Nov 30 ..	300 00	
Burrows, W. A. ....	Port Arthur .....	do .....	1912, Jan. 30 ..	600 00	
Burnes, C. W. ....	Sundridge .....	Homestead Inspector .....	1905, Nov. 15 ..	900 00	
Cameron, Wm. ....	Stratton Sta. ....	Part of District of Rainy River .....	1911, April 27 ..	500 00	
Chester, T. ....	New Liskeard .....	Homestead Inspector .....	1906, June 8 ..	1,200 00	Resigned March 31st, 1913.
Cragg, W. V. ....	New Liskeard .....	do .....	1913, March 27 ..	1,200 00	
Dean, Thos. ....	Sault Ste. Marie. ....	do .....	1908, July 29 ..	600 00	
Dempsey, S. J. ....	Cochrane .....	Part of District of Nipissing .....	1911, Feb. 1 ..	600 00	
Douglas, W. J. ....	Greenview .....	do Hastings .....	1912, June 1 ..	500 00	
Ellis, H. J. ....	Powassan .....	do District of Parry Sound .....	1909, May 20 ..	500 00	
Freeborn, Dr. J. S. ....	Magnetawan .....	do .....	1905, Nov. 10 ..	500 00	
Ginn, F. E. ....	Matheson .....	do .....	1912, March 20 ..	600 00	
Grills, J. J. ....	New Liskeard .....	Lake Temiskaming, District of Nipissing ..	1905, July 3 ..	500 00	Resigned July 31st, 1913.
Groulx, R. J. ....	Chelmsford .....	Homestead Inspector .....	1906, May 7 ..	600 00	Resigned April 30th, 1913
Hales, W. ....	Apsley .....	Part County of Peterboro .....	1911, July 17 ..	250 00	
Hollands, C. J. ....	Fort Frances .....	Part Township of Alberta and part of District of Rainy River .....	1892, Oct. 12 ..	300 00	
Hughes, Thos. ....	Murillo .....	Homestead Inspector .....	1908, July 20 ..	800 00	
Jenkin, Wm. ....	Emsdale .....	Part of District of Parry Sound .....	1908, July 29 ..	500 00	
Langlois, E. ....	Warren .....	do .....	1911, April 4 ..	500 00	
Lemieux, J. A. ....	Bleazard Valley .....	do .....	1908, July 1 ..	400 00	
MacLennan, J. K. ....	Sudbury .....	do .....	1905, July 3 ..	500 00	
McFayden, A. ....	Emo .....	do .....	1905, Sept. 8 ..	500 00	

## Appendix No. 2.—Concluded.

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1913.—Continued.

Name.	Post office address.	District or county.	Date of appointment.	Salary per annum.	Remarks.
Mulvaney, N. ....	Espanola Sta. ...	Part of District of Algoma	1912, June 1.	\$ 100 00	c.
Noble, E. ....	Sault Ste. Marie.	do	1912, June 6...	300 00	
Parsons, W. J. ....	North Bay ....	do	1908, April 8...	500 00	
Phillon, J. A. ....	Sturgeon Falls ..	do	1907, Sept. 13.	500 00	
Powell, F. R. ....	Parry Sound ....	do	1907, May 31...	500 00	
Prince, A. ....	Wilno .....	do	1905, July 12.	500 00	
Pronger, R. H. ....	Dryden .....	District of Rainy River	1906, May 7...	600 00	
Quenneville, I. ....	Sturgeon Falls ..	Homestead Inspector	1906, May 7...	300 00	Resigned Jan. 31st, 1913.
Rothwell, B. J. ....	Sault Ste. Marie.	Part District of Algoma	1909, March 1.	500 00	
Small, Robt. ....	Mattawa .....	do	1910, June 30.	1,000 00	
Smith, Dalton ....	Cochrane .....	Homestead Inspector	1912, April 16.	400 00	Also Mining Recorder.
Spry, W. L. ....	Kenora .....	Part District of Rainy River	1909, Sept. 21.	300 00	Died April 14th, 1913.
Warren, D. B. ....	Pembroke .....	do	1905, July 3...	1,000 00	
Watson, T. P. ....	New Liskeard ...	Homestead Inspector	1905, May 10.	300 00	
Watt, F. ....	Pembroke .....	Part of Renfrew	1913, May 28...	175 00	
Wilson, James ....	Kinmount .....	do	1905, April 31...	250 00	
Whybourne, W. E. ....	Marksville .....	do	1905, April 7...	600 00	
Woollings, J. ....	Englehart .....	do	1908, June 30.		

D. GEO. ROSS

Accountant.

AUBREY WHITE,

Deputy Minister of Lands and Forests.

*Appendix No. 3.*

Statement of Lands Sold and Leased. Amount of Sales and Leases and Amount of Collections for the year ending October 31st, 1913.

Service.	Acres sold and leased.	Amount of sales and leases.	Collection on sales and leases.
<i>Lands Sold:</i>		\$ c.	\$ c.
Agricultural and Townsites.....	202,088.03	151,840 93	118,134 60
Mining .....	34,375	89,161 28	95,068 94
Clergy.....	181.81	424 57	1,284 38
Common School .....			4,363 63
Grammar School .....	121	542 25	729 90
University .....	10,484.86	6,766 47	3,356 72
<i>Lands Leased:</i>			
Mining .....	9,313.24	9,313 24	20,878 43
Crown .....	4,309.86	1,908 14	18,348 05
	260,873.80	\$259,956 88	\$262,164 65

D. GEO ROSS.  
Accountant.

AUBREY WHITE.  
Deputy Minister Lands and Forests.



## Appendix No. 4.

## Statement of Revenue of the Department of Lands, Forests and Mines for the year ending October 31st, 1913.

Service.	\$ c.	\$ c.	\$ c.
<b>LAND COLLECTIONS.</b>			
<i>Crown Lands:</i>			
Agricultural .....	111,731 24		
Townsites .....	6,403 36	118,134 60	
		95,068 94	
Mining .....		213,203 54	
Clergy Lands .....	1,284 38		
Common School Lands .....	4,363 63		
Grammar School Lands .....	729 90		
University Lands .....	3,356 72	9,734 63	
<i>Rent:</i>			
Mining Leases .....	20,878 43		
Crown Leases .....	18,348 05	39,226 48	
Miners' Licenses .....	44,065 80		
Permits .....	995 00		
Recording Fees .....	48,195 30	93,256 10	
Royalties .....		200,333 01	
<i>Supplementary Revenue:</i>			
Acreage Tax .....	13,915 70		
Profit Tax .....	173,532 65		
Gas Tax .....	23,615 49	211,063 84	
			766,817 60
<b>WOODS AND FORESTS.</b>			
Bonus .....		591,675 29	
Timber Dues .....		1,277,490 08	
Ground Rent .....		99,460 19	
Transfer Fees .....		10,500 25	1,979,125 81
Provincial Assay Fees .....	404 75		
Casual Fees .....	754 88		
Cullers' Fees .....	169 00	1,328 63	
Algonquin Park .....	8,270 45		
Rondeau Park .....	1,196 83		
Forest Reserves .....	1,070 70	10,537 98	
			11,866 61
<b>REFUNDS.</b>			
Fire Ranging .....		26,501 35	
Wood Ranging .....		8,475 54	
Surveys .....		22 41	
Contingencies .....		26 05	
Agents' Salaries .....		494 60	
Mining Records .....		92 00	
Mines and Mining .....		387 90	35,999 85
			\$2,793,809 87

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 5.*

Statement of Receipts of the Department of Lands, Forests and Mines for the year ending October 31st, 1913, which are considered as Special Funds.

Service.	\$ c.	\$ c.
<i>Clergy Lands.</i>		
Principal. ....	718 19	
Interest.....	566 19	1,284 38
<i>Common School Lands.</i>		
Principal.....	1,303 50	
Interest.....	3,060 13	4,363 63
<i>Grammar School Lands.</i>		
Principal.....	629 45	
Interest.....	100 45	729 90
<i>University Lands.</i>		
Principal. ....	3,040 58	
Interest.....	316 14	3,356 72
		\$9,734 63

D. GEO. ROSS,  
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Deputy Minister of Lands and Forests.

*Appendix No. 6.*

Statement of Disbursements of the Department of Lands, Forests and Mines for the year ending October 31st, 1913.

Service.	\$ c.	\$ c	\$ c.
AGENTS' SALARIES AND DISBURSEMENTS.			
<i>Land, \$15,812.69.</i>			
Anderson, T. V. ....	208 33		
Disbursements .....	46 17	254 50	
Baker, R. H. ....	350 00		
Disbursements .....	1 58	351 58	
Both, C. ....		100 00	
Bolger, J. W. ....	125 00		
Disbursements .....	24 00	149 00	
Brown, J. B. ....	900 00		
Disbursements .....	118 60		
do Inspecting lands in Parry Sound.....	50 00	1,068 60	
Buchanan, Thos. ....		300 00	
Burrows, W. A. ....	550 00		
Disbursements .....	89 50	639 50	
Byers, R. J. ....		500 00	
Cameron, W. ....	500 00		
Disbursements .....	35 50	535 50	
Dempsay, S. J. ....	550 00		
Disbursements .....	42 95	592 95	
Douglas, W. J. ....	500 00		
Disbursements .....	11 82	511 82	
Ellis, H. J. ....		500 00	
Freeborn, Dr. J. S. ....	500 00		
Disbursements .....	10 75	510 75	
Ginn, F. E. ....	550 00		
Disbursements .....	79 23	629 23	
Grills, J. J. ....	375 00		
Disbursements .....	56 60	431 60	
Hales, W. ....		250 00	
Hollands, C. J. ....		300 00	
Jenkin, Wm. ....	500 00		
Disbursements .....	7 38	507 38	
Langlois, E. ....		500 00	
Lemieux, J. A. ....		400 00	
Mulvaney, N. ....	100 00		
Disbursements .....	4 61	104 61	
Carried forward .....		9,137 02	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forwardd</i> .....		9,137 02	
<i>AGENTS' SALARIES AND DISBURSEMENTS.—Continued.</i>			
<i>Land.—Concluded.</i>			
McFayden, A. ....	500 00		
Disbursements .....	57 32		
		557 32	
MacLennan, J. K. ....	500 00		
Disbursements .....	30 00		
		530 00	
Noble, E. ....		225 00	
Parsons, W. J. ....	500 00		
Disbursements .....	8 50		
		508 50	
Phillion, J. A. ....	500 00		
Disbursements .....	13 97		
		513 97	
Powell, F. R. ....	500 00		
Disbursements .....	17 00		
		517 00	
Prince, Adam ....	500 00		
Disbursements .....	15 50		
		515 50	
Pronger, R. H. ....	500 00		
Disbursements .....	18 10		
		518 10	
Rothwell, B. J. ....		75 00	
Small, R. ....	500 00		
Disbursements .....	6 24		
		506 24	
Spry, W. L. ....	400 00		
Disbursements .....	482 90		
		882 90	
Warren, D. B. ....		150 00	
Watt, F. ....		118 90	
Whybourne, W. E. ....	250 00		
Disbursements .....	18 14		
		268 14	
Wilson, J. ....	162 50		
Disbursements .....	12 60		
		175 10	
Woollings, Jos. ....	550 00		
Disbursements .....	64 00		
		614 00	
<i>Homestead Inspectors, \$11,127.96.</i>			
Barr, J. ....	1,200 00		
Disbursements .....	725 20		
		1,925 20	
Bastien, J. A. ....	282 25		
Disbursements .....	113 45		
		395 70	
Burnes, C. W. ....	900 00		
Disbursements .....	427 65		
		1,327 65	
Chester, T. ....	500 00		
Disbursements .....	133 81		
		633 81	
<i>Carried forward</i> .....		20,095 05	



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward.....</i>	.....	20,095 05	
<i>AGENTS' SALARIES AND DISBURSEMENTS.—Continued.</i>			
<i>Homestead Inspectors.—Concluded.</i>			
Cragg, W. V. ....	700 00		
Disbursements .....	307 99	1,007 99	
Dean, T. ....	600 00		
Disbursements .....	34 20	634 20	
Groulx, R. J. ....	317 75		
Disbursements .....	133 45	451 20	
Hughes, T. ....	800 00		
Disbursements .....	391 80	1,191 80	
Quenneville, I. ....	600 00		
Disbursements .....	150 15	750 15	
Smith, D. ....	900 00		
Disbursements .....	410 55	1,310 55	
Watson, T. P. ....	946 66		
Disbursements .....	553 05	1,499 71	
<i>Timber, \$30,537.69.</i>			
Bremner, Geo. ....	500 00		
Disbursements .....	135 45	635 45	
Christie, W. P. ....	1,600 00		
Disbursements .....	455 80	2,055 80	
Hawkins, S. J. ....	1,500 00		
Disbursements .....	449 36	1,949 36	
Henderson, C. ....	1,800 00		
Webster, W. A., Assistant .....	1,600 00		
Disbursements .....	484 98	3,884 98	
Johnson, S. M. ....	1,600 00		
Disbursements .....	172 18	1,772 18	
McDonald, H. ....	1,500 00		
Disbursements .....	379 07	1,879 07	
McDougall, J. T. ....	1,600 00		
Disbursements .....	323 86	1,923 86	
MacDonald, S. C. ....	1,600 00		
Disbursements .....	203 92	1,803 92	
Margach, Wm. ....	1,600 00		
Legris, J., Assistant .....	1,300 00		
Disbursements .....	2,642 42	5,542 42	
Maughan, Jos. ....	1,500 00		
Disbursements .....	487 46	1,987 46	
<i>Carried forward .....</i>	.....	50,375 15	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		50,375 15	
AGENTS' SALARIES AND DISBURSEMENTS.— <i>Concluded</i>			
<i>Timber.—Concluded.</i>			
Oliver, J. A. ....	1,500 00		
Penfold, G. S., Clerk .....	799 97		
Disbursements .....	803 73	3,103 70	
Stevenson, A. ....	1,500 00		
Disbursements .....	389 74	1,889 74	
Watts, Geo. ....	1,500 00		
Disbursements .....	609 75	2,109 75	
<i>Miscellaneous, \$1,594.22.</i>			
Ames, D. H., Caretaker, Islands in Dog and Laboria Lakes .....		20 00	
Bilton, Geo., Caretaker, Islands in North and South Crosby .....		25 00	
Buchan, S., Inspecting Homesteads .....		8 20	
Danis, S., Caretaker, Leonard Islands .....		20 00	
Evans, F., Inspecting Townships of Britton and Rowell .....		75 00	
Guthrie, W., Caretaker of Islands in Devil's Lake. Langford, Wm., Examining and Valuating Water lots .....		25 00	
		15 00	
Lovering, H. L., Inspecting Islands in Severn River .....		5 00	
McArthur, T. A., Inspector of Agencies .....	600 00		
Disbursements .....	483 60	1,083 60	
Margach, J. A., Inspecting Townships of Britton and Rowell .....		17 42	
Moran, A., Inspecting Township of Burns .....		300 00	
OTTAWA AGENCY.			59,072 56
Darby, E. J., Agent .....		1,500 00	
Larose, S. C., Clerk .....		1,000 00	
Rent .....	500 00		
Disbursements.....	83 51	583 51	
WOOD RANGING.			3,083 51
Allen, R. A. ....		1,150 00	
Ansley, W. E. ....		700 00	
Arnell, William .....		705 00	
Atcheson, Ira M. ....		740 00	
Appleton, E. ....		348 00	
Bailey, S. I. ....		940 00	
Barrett, Thomas .....		1,030 00	
Bates, R. ....		620 00	
Baulk, G. R. ....		260 00	
Bliss, L. E. ....	775 00		
Disbursements .....	645 88	1,420 88	
Bremner, George .....		445 00	
Brooks, W. J. ....		755 00	
<i>Carried forward</i> .....		9,113 88	62,156 07

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		9,113 88	62,156 07
<i>WOOD RANGING.—Continued.</i>			
Brown, J. F. ....		488 00	
Buchan, T. ....		580 00	
Buchan, S. ....		810 00	
Buile, D. ....		670 19	
Buisson, William .....		665 00	
Burns, W. S. ....		542 50	
Callaghan, T. ....		600 00	
Castonguay, A. C. ....		85 00	
Chenier, D. A. ....		945 00	
Clark, W. R. ....		316 00	
Comer, B. F. ....		280 00	
Coomes, Roy .....		20 00	
Corrigan, R. T. ....		950 00	
Coyne, Phin .....		865 00	
Cross, J. G. ....		212 00	
Cross, R. J. ....		284 00	
Didier, H. ....		1,285 00	
Dougherty, J. M. ....		160 00	
Durrill, Wm. ....		1,365 00	
Duval, C. A. ....	775 00		
Disbursements .....	2 20		
		777 20	
Evans, Fred. ....		17 50	
Faulkner, W. ....		364 00	
Ferguson, E. A. ....		890 00	
Fisher, George .....		1,050 00	
Frankar, A. ....		20 00	
Fraser, D. ....		1,175 00	
Fraser, T. ....		342 00	
Gamey, W. H. ....		720 00	
Gill, C. ....		160 00	
Gilligan, E. ....	845 00		
Disbursements .....	1 50		
		846 50	
Gorman, J. P. ....		591 73	
Hagan, E. G. ....		685 00	
Harkins, J. J. ....		296 00	
Hartley, C. ....		1,280 00	
Henderson, Chas. ....	Disbursements	29 50	
Hey, Ben. ....		360 00	
Huckson, A. H. ....	885 00		
Disbursements .....	1,201 37		
		2,086 37	
Hutton, John .....		1,180 00	
Irving, E. ....		585 00	
Johnson, G. N. ....		516 00	
Johnston, T. ....		728 00	
Kay, A. ....		404 00	
Lee, J. B. ....		845 00	
Leroy, L. H. ....		952 00	
Long, H. E. ....		890 00	
Lowe, W. C. ....		340 00	
MacDonald, J. K. ....		16 00	
Macdonell, R. D. ....		775 00	
MacGillivray, D. D. ....		416 00	
MacNamara, J. ....		700 00	
Manice, Wm. ....		1,280 00	
Margach, Wm. ....	Disbursements	401 93	
<i>Carried forward</i> .....		41,956 30	62,156 07

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		41,956 30	62,156 07
WOOD RANGING.— <i>Continued.</i>			
Margach, J. A. ....	717 00		
Disbursements .....	16 37		
		733 37	
Maughan, J. .... Disbursements ..		84 30	
Menzies, A. ....		1,100 00	
Milway, J. H. ....		1,695 00	
Molyneaux, G. ....		780 00	
Mooney, L. ....	905 00		
Disbursements .....	28 10		
		933 10	
Mongrain, Chas. ....		39 00	
Morel, H. ....		476 00	
Mulroney, W. J. and G. .... Books....		9 90	
Murray, Wm. ....		1,695 00	
McAuley, W. D. ....		670 19	
McCaw, J. G. ....		1,560 00	
McDonald, A. ....		676 00	
McDonald, A. J. ....	620 00		
Disbursements .....	95 70		
		715 70	
McDonald, J. D. ....		1,390 00	
McDonald, H. .... Disbursements ..		14 00	
McDonald, T. ....		321 00	
McGrath, B. ....		126 00	
McGregor, C. F. ....		590 00	
McIvor, J. A. ....		832 00	
McKenzie, R. ....		644 00	
McMillan, J. ....		352 00	
McNab, Alex. ....		915 00	
McPherson, J. S. ....		1,390 00	
McRae, D. A. ....		108 00	
Nault, James ....		668 00	
Nevison, W. H. ....		564 00	
Newburn, Wm. ....		745 00	
Niblett, Jas. ....		490 00	
Norgate, C. ....		444 00	
Patterson, M. ....		126 00	
Paul, C. A. ....		1,111 54	
Pigott, John ....		995 00	
Purdy, John ....		140 00	
Revell, L. O. ....		1,565 00	
Ridley, Robt. ....		1,415 00	
Ritchie, J. A. ....		595 00	
Ross, S. ....		1,120 00	
Rowe, F. E. ....		336 00	
Rusk, O. ....		845 00	
Sanderson, Geo. ....		484 00	
Sanderson, D. ....		105 00	
Sharp, J. A. ....		865 00	
Shaw, Alf. ....		1,170 00	
Shaw, D. ....		528 00	
Shields, F. ....		568 00	
Short, J. ....		344 00	
Simmons, A. G. ....		624 00	
Simpson, Wm. ....		810 00	
Sisson, H. P. ....		360 00	
Smith, V. ....		180 00	
Smith, J. D. C. ....		528 00	
<i>Carried forward</i> .....		77,531 40	62,156 07



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward.....</i>		77,531 40	62,156 07
<i>WOOD RANGING.—Concluded.</i>			
Spence, D. ....		445 00	
Stein, Paul ....		1,111 54	
Thompson, G. S. ....		915 00	
Thompson, Harry ....		409 00	
Thomson, L. H. ....		110 00	
Thorpe, Thos. ....		820 00	
Tucker, L. A. ....		620 00	
Urquhart, A. ....		1,090 00	
Vincent, H. T. ....		1,180 00	
Wallace, Fred. ....		320 00	
Watts, W. B. ....		584 00	
Watts, J. J. ....		60 00	
Watts, Geo. .... Disbursements		3 00	
Webster, W. A. .... Disbursements		300 00	
Western, C. ....		365 00	
Whelan, P. J. ....		1,700 00	
White, A. T. ....		485 00	
Wilkins, G. N. ....		475 00	
Wilson, D. ....		885 00	
Wood, W. D. ....		434 81	
Yuill, Thomas ....		890 00	
Young, R. J. ....		576 00	
<i>EXPLORATION AND ESTIMATION OF TIMBER BERTHS.</i>			91,309 75
Beaudry, Bazil ....		39 00	
Chartrand, Mitchelle ....		135 00	
Henderson, Chas. .... Disbursements		903 37	
Huckson, A. H. .... Disbursements		1,400 13	
Webster, W. A. .... Disbursements		544 15	
Patterson, Malcolm ....		171 00	
Tang, John ....		195 00	
<i>FIRE RANGING.</i>			3,387 65
Acheson, Lloyd ....		14 00	
Adams, A. ....		382 50	
Allen, D. ....		377 50	
Allen, T. W. ....		370 00	
Alt, J. C. ....		367 50	
Armstrong, W. H. ....		325 00	
Armstrong, J. G. ....		342 50	
Armstrong, T. C. ....		367 50	
Arnott, Wm. ....		262 50	
Bailey, H. ....		367 50	
Baker, R. O. ....		345 00	
Baker, D. M. ....		380 00	
Bartlett, G. W. .... Disbursements		671 99	
Bartlett, E. A. ....		382 50	
Bastien, J. ....		255 00	
Bedal, C. ....		382 50	
Beddome, W. E. ....		357 50	
Begin, Paul ....		297 50	
Behaniel, Geo. ....		377 50	
Belanger, E. ....		372 50	
Belanger, X. ....		178 75	
Bell, D. E. ....		375 00	
Bellefuville, M. ....		208 75	
<i>Carried forward .....</i>		7,760 99	156,853 47

## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c
<i>Carried forward</i> .....		7,760 99	156,853 47
<b>FIRE RANGING.—Continued.</b>			
Berry, G. W. ....		200 00	
Berry, Geo. ....		367 50	
Berrige, C. ....		265 00	
Bertrand, H. ....		407 50	
Biederman, Wm. ....		340 00	
Bisaillon, J. H. .... Disbursements		11 20	
Bisaillon, C. H. ....		375 00	
Bissonette, R. ....		370 00	
Black, J. R. ....		28 60	
Blair, Bert ....		20 00	
Blais, O. ....		372 50	
Bliss, L. E. .... Disbursements		1,755 68	
Bonter, S. ....		382 50	
Bookhout, H. ....		365 00	
Bottrell, D. ....		380 00	
Bouchard, M. ....		15 00	
Bowin, J. ....		302 50	
Bowman, J. M. ....		290 00	
Brant, George ....		290 00	
Brown, T. E. ....		367 50	
Brown, Thos. ....		372 50	
Brown, A. ....		375 00	
Brooks, A. ....		515 00	
Brozeau, — ....		397 50	
Brum, A. ....	765 00		
Disbursements	883 63		
		1,648 63	
Brunet, A. ....		372 50	
Bryan, A. E. ....		335 00	
Buchanan, R. F. ....		377 50	
Buie, D. ....	592 00		
Disbursements	31 60		
		623 60	
Buisson, Wm. ....		272 50	
Burger, Wm. ....		382 50	
Burns, R. ....		337 50	
Burns, W. S. ....		612 00	
Buttle, W. W. ....		335 00	
Campbell, D. ....		367 50	
Campbell, Alex. ....		375 00	
Campbell, W. L. ....		367 50	
Cameron, W. J. ....		387 50	
Carnochan, G. ....		385 00	
Cavanagh, S. ....		337 50	
Ceasar, H. P. ....		175 00	
Chaffey, William ....		375 00	
Chapman, William ....		375 00	
Chambers, Thomas ....		370 00	
Chatson, Fred. ....		320 00	
Chenier, H. ....		372 50	
Chittick, W. J. ....		312 50	
Christie, W. P. .... Disbursements		463 04	
Christie, W. I. ....	456 00		
Disbursements	114 00		
		570 00	
Clark, H. ....		372 50	
Conture, D. ....		295 00	
Coombs, Jos. ....		314 00	
<i>Carried forward</i> .....		28,157 74	156,853 47

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		28,157 74	156,853 47
<i>FIRE RANGING.—Continued.</i>			
Copley, J. D. ....		330 00	
Countryman, J. S. ....		375 00	
Connigham, J. ....		380 00	
Coyne, Phin. ....	765 00		
Disbursements .....	103 84		
		868 84	
Craigie, H. ....		382 50	
Curry, P. W. M. ....		342 50	
Dance, H. L. ....		324 00	
Dancey, Wm. ....		318 00	
Danis, D. ....		275 00	
Darlington, E. ....		222 50	
Davidson, Ira ....		355 00	
Dean, P. C. ....		377 50	
Dean, A. ....		377 50	
Deagle, E. ....		387 50	
De Laronde, D. ....		247 50	
De Laronde, J. ....		20 00	
Deschamp, N. ....		215 00	
Deschene, A. ....		365 00	
Dial, A. C. ....		367 50	
Didier, H. ....		125 00	
Dingle, R. ....		380 00	
Dobbs, G. W. ....		375 00	
Dougherty, A. E. ....		370 00	
Douglas, Wm. ....		270 00	
Doolittle, R. ....		345 00	
Doyle, James ....		292 50	
Doyle, Gus ....		375 00	
Duff, R. A. ....		535 00	
Duffy, Isaac ....		267 50	
Duncan, R. ....		363 00	
Dyson, W. ....		375 00	
Edgar, G. R. ....		370 00	
Eilber, Geo. ....		382 50	
Ellmott, J. ....		370 00	
Ellis, E. C. ....		367 50	
Ellsworth, C. B. ....		382 50	
English, M. ....		385 00	
Fairbairn, N. H. ....	568 00		
Disbursements .....	83 87		
		651 87	
Farrell, S. H. ....		162 50	
Favreau, Geo. ....		382 50	
Ferguson, G. ....		385 00	
Ferguson, Thos. ....		377 50	
Fisher, Geo. ....		564 00	
Fitzback, John ....		250 00	
Fitzgerald, R. ....		345 00	
Fitzpatrick, P. ....		32 00	
Flannigan, J. ....		375 00	
Flynn, M. ....		382 50	
Fraser, W. J. ....		377 50	
Fraser, Alex. ....		365 00	
Fraser, W. A. ....		382 50	
Furry, C. ....		385 00	
Gagne, F. ....	765 00		
Disbursements .....	212 28		
		977 28	
<i>Carried forward</i> .....		47,414 23	156,853 47

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		47,414 23	156,853 47
<i>FIRE RANGING.—Continued.</i>			
Galt, R. ....		357 50	
Gale, W. J. ....		367 50	
Garrow, J. ....		387 50	
Gault, J. ....		397 50	
Gauthier, J. ....		284 00	
Gauthier, Theo. ....		365 00	
Gemmell, John ....	560 00		
Disbursements .....	173 85		
		733 85	
Gervais, F. ....		377 50	
Giles, F. ....		375 00	
Gillanders, G. K. ....		375 00	
Gillies, A. E. ....		312 50	
Giroux, J. O. ....		416 20	
Gladd, A. ....		286 00	
Glover, E. ....		375 00	
Godin, E. ....		152 50	
Goyette, Eug. ....		230 00	
Groulx, R. ....		142 50	
Guthrie, Wm. ....		382 50	
Hackett, Wm. ....		365 00	
Hammond, H. ....		325 00	
Hammond, W. ....		375 00	
Hanbury, H. ....		97 50	
Hand, Thos. ....		548 00	
Hanks, F. ....		372 50	
Hanmer, Geo. ....		387 50	
Hardy, F. ....		247 50	
Hardy, J. ....		190 00	
Hargrave, H. R. ....		345 00	
Harper, G. ....		202 00	
Harris, Geo. ....		375 00	
Hartley, Chas. ....		28 95	
Hays, Jos. ....		250 00	
Henderson, Chas. ....	Disbursements	576 41	
Henderson, J. ....		365 00	
Hennessey, Wm. ....		344 00	
Heroux, J. ....		287 50	
Higgins, Robt. ....		320 00	
Hill, J. E. ....		352 50	
Hollis, J. ....		370 00	
Holmes, J. A. ....		367 50	
Holmes, J. H. ....		377 50	
Hutchinson, Fred. ....		174 00	
Irish, Wm. ....		397 50	
Isbister, J. A. ....		302 50	
James, G. ....		312 50	
Jamieson, K. ....		340 00	
Jarvis, E. ....		377 50	
Jenkins, S. ....	642 00		
Disbursements .....	214 00		
		856 00	
Jodoin, A. ....		7 50	
Jones, R. E. ....		337 50	
Johnston, Wm. ....		336 00	
Johnson, J. ....		14 00	
Johnston, T. ....		49 50	
Johnston, S. ....		327 50	
<i>Carried forward</i> .....		65,013 14	156,853 47



## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		65,013 14	156,853 47
<i>FIRE RANGING.—Continued.</i>			
Kells, Lorn .....		380 00	
Kelly, T. ....		460 00	
Kelly, M. ....		372 50	
Keith, G. R. ....		375 00	
Keenahan, M. ....		382 50	
Kennaedy, N. ....		102 50	
Kerr, Alex. ....		274 00	
Kiely, C. A. ....		385 00	
Labell, A. ....		305 00	
Lafontaine, P. ....		166 00	
Lamb, D. ....		382 50	
Langford, Thos. ....		337 50	
Lanktree, J. ....		362 50	
Larocque, M. ....		102 50	
Laurin, J. A. ....		365 00	
Leblanc, O. ....	600 00		
Disbursements .....	48 27		
Lechner, H. ....		648 27	
Leggett, C. ....		152 50	
Legris, John .....		382 50	
Leo, Philip .....		3 15	
Lee, J. B. ....	830 00	330 00	
Disbursements .....	518 93		
		1,348 93	
Liddle, H. W. ....		320 00	
Linklater, Wm. ....		330 00	
Lennox, T. A. ....		380 00	
Locheed, R. W. ....		372 50	
Lockhart, W. H. ....		372 50	
Logan, H. ....		347 50	
Long, H. E. ....	790 00		
Disbursements .....	210 10		
		1,000 10	
Loy, Robt. ....		377 50	
MacDonald, S. C. ....		10 45	
Macdonell, R. D. ....		524 00	
Mack, F. ....		298 00	
MacNeill, E. R. ....		382 50	
Margach, Wm. ....		2,419 39	
Margach, J. A. ....		344 00	
Marshall, J. A. ....		377 50	
Manice, Wm. ....		46 55	
Mattison, G. W. ....		365 00	
Maughan, J. ....		87 60	
May, H. ....	820 00		
Disbursements .....	327 75		
		1,147 75	
Menzies, A. ....		520 00	
Merchant, H. ....		397 50	
Merchant, J. ....		380 00	
Mickle, Dymont & Co. ....		35 20	
Micholson, J. ....		10 00	
Miller, R. ....		460 00	
Mitchell, F. ....		285 00	
Molyneaux, G. ....	456 00		
Disbursements .....	114 00		
		570 00	
<i>Carried forward</i> .....		84,791 53	156,853 47

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		84,791 53	156,853 47
<i>FIRE RANGING.—Continued.</i>			
Morand, L. ....		382 50	
Morel H. ....		580 00	
Morin, J. ....		382 50	
Moore, B. ....		325 00	
Moore, Jas. ....		367 50	
Moorhouse, C. H. ....		152 00	
Morris, Norman ....		375 00	
Morris, Nelson D. ....		113 75	
Morris, D. D. ....		280 00	
Murray, C. A. B. ....		215 00	
McArthur, J. A. ....		347 50	
McAuley, W. D. ....		592 00	
McCaffrey, L. E. ....		66 66	
McCallum, A. ....		282 50	
McColl, Wm. ....		367 50	
McConnell, E. ....		382 50	
McCulloch, T. ....		317 50	
McCullough, D. J. ....		382 50	
McDonald, Ed. ....		230 00	
McDonald, T. ....		304 00	
McDonell, L. P. ....		195 00	
McEwen, H. A. ....		365 00	
McIntosh, Jas. ....		372 50	
McKay, Alex. ....		285 00	
McKechnie, J. N. ....		214 00	
McKenzie, A. ....		377 50	
McKinnon, H. ....		370 00	
McLarin, W. A. ....		367 50	
McLaughlin, J. ....		372 50	
McLean, M. ....		365 00	
McLeod, F. W. ....		10 00	
McMillan, J. J. ....		365 00	
McMullen, S. J. ....		367 50	
McMurry, John ....		377 50	
McPhee, D. J. ....		355 00	
McPherson, Jas. ....		375 00	
McQuade, H. ....		385 00	
McQuin, W. J. ....		325 00	
McRae, D. A. ....		489 00	
McRae, Ross ....		382 50	
Neelon, G. M. ....		392 50	
Newburn, Wm. ....		560 00	
Netemegesia, A. ....		20 00	
Nockwenogis, L. ....		20 00	
Northcott, A. ....		375 00	
Oldfield, A. ....		152 50	
Oliver, J. A. ....	Disbursements	267 60	
Orange, W. H. ....		115 00	
Ouellette, F. ....		375 00	
Paterson, H. L. ....		67 50	
Patterson, Bert ....		382 50	
Pierce, F. ....		387 50	
Poulin, N. ....		360 00	
Priest, A. H. ....		370 00	
Prestley, J. ....		312 50	
Pringle, A. ....		375 00	
Pritchard, F. ....		445 00	
Pronge, L. ....		352 50	
Proulx, A. ....		387 50	
Quilty, T. J. ....		375 00	
<i>Carried forward</i> .....		104,045 54	156,853 47

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		104,045 54	156,853 47
<i>FIRE RANGING.—Continued.</i>			
Rabbitts, Max .....		608 00	
Racey, M. J. ....		367 50	
Radcliffe, C. A. ....		354 75	
Radford, C. H. ....		382 50	
Ranger, A. ....		392 50	
Read, C. F. ....	397 50		
Disbursements .....	10 00		
		407 50	
Readman, R. E. ....		277 50	
Redden, M. J. ....		385 00	
Reed, C. D. ....		345 00	
Reemus, C. ....		337 50	
Retty, James .....		8 00	
Reeve, E. M. ....		360 00	
Reeves, E. H. ....		367 50	
Ridley, Robt. ....		125 00	
Richardson, J. ....		382 50	
Richardson, J. S. ....		367 50	
Ritchie, J. A. ....		348 00	
Robertson, Wm. ....		127 50	
Rochfort, A. ....		382 50	
Rodden, M. J. ....		365 00	
Row, James .....		382 50	
Rusk, O. ....	805 00		
Disbursements .....	1,742 98		
		2,547 98	
Russell, Alex. ....		356 00	
Ryan, Thos. ....		302 00	
Ryan, Wm. ....		370 00	
Saunders, H. ....		357 50	
Saunderson, S. L. ....		300 00	
Savard, A. ....		377 50	
Sauve, J. ....		377 50	
Scott, Robt. ....		568 00	
Seymour, J. ....		382 50	
Shields, H. ....		365 00	
Shields, F. ....		10 00	
Shilling, Harry ....		292 00	
Short, J. ....		94 50	
Skune, B. ....		302 50	
Sloan, J. ....		365 00	
Small, M. A. ....		367 50	
Smith, E. J. ....		367 50	
Smith, E. J. ....		258 75	
Smith, H. S. ....		365 00	
Smyth, Wm. ....		172 50	
Solomon, J. ....		202 00	
Spearing, F. ....		342 50	
Spence, A. ....		360 25	
Spence, D. ....		380 00	
Spillett, J. J. ....		367 50	
Spillett, A. F. ....		367 50	
Stark, W. ....		372 50	
Stephens, S. J. ....		370 00	
Stewart, J. A. ....	820 00		
Disbursements .....	859 25		
		1,679 25	
Stewart, Chas. ....		370 00	
Stewart, R. ....		375 00	
<i>Carried forward</i> .....		125,205 02	156,853 47

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		125,205 02	156,853 47
<i>FIRE RANGING—Concluded.</i>			
Stevens, Alex. ....		372 50	
Stevenson, R. ....		375 00	
Storey, V. H. ....		330 00	
Stubbington, F. J. ....		372 50	
Strain, J. ....		267 50	
Superior Construction Co. ....		188 96	
Thomas, Phil. ....		400 00	
Thomas, E. G. ....		370 00	
Thompson, G. S. ....	564 00		
Disbursements .....	228 95		
		792 95	
Tighe, F. J. ....		460 00	
Tooke, S. ....		375 00	
Toomer, Sam. ....		375 00	
Toussant, J. D. ....		352 50	
Tower, O. ....		604 00	
Trembaly, E. ....		370 00	
Trembley, Theo. ....		370 00	
Turney, W. J. ....		332 50	
Tye, R. H. ....		535 00	
Twigg, J. F. ....		302 50	
Urquhart, A. ....		548 00	
Valois, Pat. ....		367 50	
Walker, G. ....		370 00	
Walker, Geo. ....		365 00	
Wallace, Jas. ....		382 50	
Wallace, W. C. ....		212 50	
Warner, H. B. ....		377 50	
Washburn, B. ....		372 50	
Watson, A. ....		307 50	
Watts, Geo. ....	Disbursements	279 13	
Wease, A. ....		387 50	
Webster, R. D. ....		370 00	
Weir, G. A. ....		375 00	
West, W. H. ....		370 00	
Westro, H. ....		367 50	
Welch, J. ....		337 50	
Whalley, H. ....		307 50	
White, R. ....		75 00	
Whiteoak, D. ....		375 00	
Whytock, H. ....		372 50	
Wickens, H. ....		346 50	
Williams, R. A. ....		390 00	
Williams, R. E. ....		380 00	
Williams, J. ....		327 50	
Wilson, H. J. ....		190 00	
Wilson, L. ....		45 50	
Wilson, J. G. ....		367 50	
Wilkins, G. N. ....		560 00	
Windell, Jas. ....		608 00	
Wing, R. H. ....		300 00	
Wooden, John ....		260 00	
Woodcock, Geo. ....		460 00	
Wright, A. ....		360 25	
Wright, John ....		382 50	
Yuill, Maurice ....		297 50	
Young, R. R. ....		380 00	
Young, Jesse ....		175 00	
			145,500 81
<i>Carried forward</i> .....			302,354 28



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			302,354 28
FOREST RESERVES.			
<i>Temagami Reserve—\$46,326.93.</i>			
Albright, L. ....		375 00	
Albright, E. ....		375 00	
Allan, W. N. ....		350 00	
Baldwin, J. F. ....		250 00	
Barraclough, W. W. ....		322 50	
Barrett, Thos. ....	785 00		
Disbursements .....	146 23		
		931 23	
Beatty, J. S. ....		332 50	
Bedford, H. ....		357 50	
Benoit, Ed. ....		367 50	
Bertrand, O. ....		367 50	
Bibet, L. A. ....		375 00	
Bissette, J. ....		372 50	
Boivin, H. ....		372 50	
Brewster, H. S. ....		332 50	
Brook, J. H. ....		372 50	
Brown, J. F. ....		167 50	
Cavill, A. H. ....		372 50	
Champagne, I. ....		372 50	
Chase, T. E. ....		347 50	
Clement, F. W. ....		335 00	
Coombs, F. H. ....		340 00	
Coghill, J. R. ....		357 50	
Corbett, G. E. ....		372 50	
Cronk, S. ....		357 50	
Davidson, R. D. ....		372 50	
D'Embremont, F. ....		370 00	
Desroislers, John ....		260 00	
Donovan, C. R. ....		357 50	
Ellis, R. A. ....		357 50	
Evans, J. J. ....		247 50	
Faeris, R. ....		1,061 50	
Fennell, R. E. ....		335 00	
Ferguson, N. C. ....		340 00	
Flanigan, H. ....		332 50	
Forsyth, G. ....		307 50	
Gauthier, O. ....		372 50	
Gibson, G. A. L. ....		327 50	
Goodearle, W. E. ....		350 00	
Grenier, Jas. ....		372 50	
Haight, B. ....		355 00	
Haines, H. ....		357 50	
Harkness, A. E. ....		372 50	
Harrison, J. ....		372 50	
Harrison, W. ....		372 50	
Henderson, Charles .....	Disbursements	42 58	
Herlihy, D. ....		367 50	
Herrick, C. P. ....		372 50	
Higgins, L. ....		370 00	
Hindson, C. E. ....	1,300 00		
Disbursements .....	1,247 02		
		2,547 02	
Holstein, A. ....		360 00	
Holland, B. J. ....		172 50	
Johnson, W. J. ....		345 00	
<i>Carried forward</i> .....		21,047 33	302,354 28

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		21,047 33	302,354 28
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Continued.</i>			
Keats, G. ....		52 50	
Keenan, J. ....		372 50	
Kennedy, W. ....		560 00	
Kirkup, N. B. ....		345 00	
Lamarche, A. ....		912 50	
Lamarche, C. A. ....		372 50	
Larmour, R. R. ....		367 50	
Latoure, John ....		360 00	
Lewis, G. T. ....		370 00	
Livingstone, J. ....		377 50	
Lyon, J. W. ....		367 50	
Masson, D. M. ....		372 50	
Mansfield, J. ....		360 00	
Maynard, W. B. ....		317 50	
Melville, R. ....		332 50	
Montgomery, A. ....		377 50	
Montriel, Joe ....		310 00	
Morel, H. ....		50 00	
Murphy, P. ....		372 50	
McCadden, P. ....		372 50	
McClennaghan, A. R. ....		372 50	
McGuire, T. ....		367 50	
McKay, A. ....		367 50	
McLeod, J. D. ....		362 50	
McPherson, N. ....		330 00	
Nadon, P. ....		372 50	
Neil, W. ....		372 50	
Nicholas, H. ....		372 50	
O'Neil, W. S. ....		372 50	
Papineau, Joe ....		375 00	
Passmore, S. ....		372 50	
Perron, M. ....		220 00	
Philpot, G. N. ....		340 00	
Powell, John ....		372 50	
Reid, J. T. ....		332 50	
Robertson, N. S. ....		335 00	
Rochon, J. ....		912 50	
Rochon, F. ....		372 50	
Rowntree, C. E. ....		305 00	
Russell, F. ....		372 50	
Sage, P. ....		370 00	
Sasseville, J. ....		207 50	
Scott, J. K. ....		287 50	
Shannon, P. R. ....		340 00	
Shelson, H. ....		367 50	
Simpson, Theo. ....		370 00	
Smith, F. R. ....		345 00	
Smith, C. E. ....		285 00	
Sparks, W. E. L. ....		345 00	
Sturgeon, E. W. ....		357 50	
Stevenson, G. H. ....		345 00	
Sutton, Fred. ....		370 00	
Thorley, C. W. ....		370 00	
Vivaris, D. ....		912 50	
Vivaris, M. ....		372 50	
Wagner, H. W. ....		375 00	
Westman, L. E. ....		340 00	
<i>Carried forward</i> .....		42,329 83	302,354 28

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		42,329 83	302,354 28
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Concluded.</i>			
Western, C. ....		372 50	
White, J. ....		355 00	
Whitney, K. H. ....		305 00	
Wender, Alf. ....		372 50	
Williams, C. ....		372 50	
Willons, C. E. ....		292 50	
Willoughby, J. B. ....		327 50	
Wilson, H. P. ....		375 00	
Wilson, B. ....		372 50	
Young, R. J. ....	790 00		
Disbursements .....	62 10		
		852 10	
<i>Metagami Reserve, \$8,882.88.</i>			
Briggs, A. V. ....		272 50	
Burden, John .....	905 00		
Disbursements .....	302 88		
		1,207 88	
Butterfield, J. ....		390 00	
Cromarty, R. P. ....		337 50	
Dixon, H. A. ....		347 50	
Hughes, J. E. L. ....		360 00	
Jefferies, W. G. ....		275 00	
Lawrence, C. F. ....		272 50	
Manerd, N. ....		315 00	
Marchell, I. ....		360 00	
Marks, V. ....		360 00	
McCandless, J. W. ....		357 50	
McFayden, James .....		355 00	
McIntyre, J. S. ....		360 00	
Ogg, C. S. ....		355 00	
Porter, C. H. ....		357 50	
Reid, J. ....		412 50	
Scullard, G. ....		347 50	
Stirrett, H. C. ....		357 50	
Taylor, W. J. ....		390 00	
Taylor, J. S. ....		355 00	
Thomson, Thomas .....		390 00	
Vowles, F. J. ....		347 50	
<i>Mississaga Reserve, \$12,680.63.</i>			
Allan, George .....		390 00	
Belanger, Thos. ....		392 50	
Belaney, Archie .....		395 00	
Bickell, R. R. ....		392 50	
Boyd, D. J. ....		367 50	
Burden, J. H. ....		395 00	
Burden, Wm. ....		387 50	
Cameron, Bruce .....		370 00	
Cameron, George .....		385 00	
Copp, F. C. ....		390 00	
Dougherty, E. A. ....		380 00	
<i>Carried forward</i> .....		59,454 81	302,354 28

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		59,454 81	302,354 28
<i>FOREST RESERVES.—Continued.</i>			
<i>Mississauga Reserve.—Concluded.</i>			
Duval, C. A. ....	845 00		
Disbursements .....	355 78		
		1,200 78	
Dyson, Isaac .....		370 00	
Esson, Thomas .....		197 50	
Eveline, H. ....		372 50	
Eveline, A. ....		372 50	
Eveline, Stanley .....		225 00	
Featherstonehaugh, M. H. ....		390 00	
Findlayson, C. ....		365 00	
Garrett, F. A. ....		372 50	
Hall, Thomas .....		392 50	
Haskett, K. R. ....		367 50	
Hodder, F. ....		52 50	
Hope, L. S. ....		282 50	
Jean, A. ....		382 50	
Knox, D. ....		355 00	
McCallum, A. J. ....		347 50	
McClelland, R. S. ....		332 50	
Miller, J. W. ....		222 50	
Murphy, J. W. ....		370 00	
Putney, A. F. ....		365 00	
Sawyers, C. E. ....		372 50	
Taylor, J. R. ....		332 50	
Wright, H. V. ....		370 00	
Young, William .....	12 50		
Disbursements .....	12 35		
		24 85	
<i>Nepigon Reserve, \$12,264.73.</i>			
Allan, J. B. ....		297 50	
Blair, Bert .....		430 00	
Bliss, L. E. ....	920 00		
Disbursements .....	2,993 98		
		3,913 98	
Bouchard, J. ....		485 00	
Bouchard, M. ....		117 50	
Burns, W. S. ....		48 00	
Coombs, J. ....		50 00	
Couch, R. ....		367 50	
Copley, J. D. ....		30 00	
DeLaronde, D. ....		30 00	
Ferris, R. ....		370 00	
Fitzpatrick, P. ....		280 00	
Fraser, G. ....		362 50	
Hardy, F. ....		30 00	
Harris, R. ....		327 50	
Harper, G. ....		30 00	
Heffernan, J. J. ....		402 50	
Higgins, R. ....		47 50	
Husband, A. C. ....		277 50	
Judge, S. E. ....		400 00	
King, G. E. ....		337 50	
Lafontaine, Paddy .....		67 50	
<i>Carried forward</i> .....		76,592 42	302,354 28



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		76,592 42	302,354 28
<i>FOREST RESERVES.— Concluded.</i>			
<i>NEPIGON RESERVE.—Concluded.</i>			
Linklater, Wm. ....		30 00	
Lower, A. R. ....		325 00	
McDowell, T. W. ....		312 50	
Monahan, P. ....		355 00	
Pigeon, C. ....		392 50	
Rae, A. ....		485 00	
Ritchie, S. ....		317 50	
Sadsbury, Martin ....		567 75	
Scott, C. V. ....		332 50	
Shilling, H. ....		67 50	
Solomon, J. ....		30 00	
Young, N. M. ....		347 50	
<i>Eastern Reserve, \$2,941.56.</i>			
Brown, Geo. ....		382 50	
Drysdale, S. ....		377 50	
Egan, Wm. .... Disbursements		21 40	
Shultz, J. ....		382 50	
Snider, L. ....		382 50	
Stewart, Wm. ....		382 50	
Tapping, Thos. ....	566 00		
Disbursements .....	64 16		
		630 16	
Young, Geo. ....		382 50	
<i>Sibley Reserve, \$835.00.</i>			
Hornick, Geo. ....		367 50	
Oliver, J. A. ....		100 00	
Quinn, J. J. ....		367 50	
<i>Quetico Reserve, \$4,077.00.</i>			
Bone, H. ....		280 00	
Darby, W. ....		280 00	
Gadd, H. ....		280 00	
Gibson, W. T. ....		280 00	
Johnson, R. G. ....		280 00	
King, A. ....		275 00	
Leham, W. ....		280 00	
Martin, E. ....		277 50	
McDonald, D. ....		280 00	
McDonald, A. ....		275 00	
Sexsmith, R. ....		277 50	
Sturdy, R. ....		280 00	
Wall, Geo. ....		452 00	
Wall, S. ....		280 00	
			88,008 73
<i>Carried forward</i> .....			390,363 01

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			390,363 01
FORESTRY.			
Newman, F. S., Assistant Forester, services one month .....		133 34	
Brock, John, Purchase of S. $\frac{1}{2}$ , N. $\frac{1}{2}$ , Lot 24, Con. 5, Township of Walsingham.....		1,000 00	
Bell Telephone Company .....	20 50		
Express .....	123 45		
		143 95	
Labor .....		4,471 28	
Supplies .....		1,660 01	
			7,408 58
MINES AND MINING.			
Miller, W. G., Provincial Geologist, services.....	4,350 00		
Disbursements .....	245 95		
		4,595 95	
Knight, C. W., 1st Assistant Geologist, services...	2,150 00		
Disbursements .....	304 29		
		2,454 29	
Burrows, A. G., 2nd Assistant Geologist, services..	2,050 00		
Disbursements .....	288 41		
		2,338 41	
Hopkins, P. E., 3rd Assistant Geologist, services..	1,250 00		
Disbursements .....	176 83		
		1,426 83	
Mickle, G. R., Mine Assessor, services .....	4,000 00		
Disbursements .....	710 50		
		4,710 50	
Godson, T. E., Mining Commissioner, services....	3,857 54		
Dance, R. W., Mining Commissioner's Clerk, services .....	1,400 00		
Disbursements .....	1,422 43		
		6,679 97	
Corkill, E. T., Inspector of Mines, services .....	1,875 00		
Disbursements .....	531 00		
		2,406 00	
Sutherland, T. F., Inspector of Mines, services....	2,350 00		
Disbursements .....	1,365 50		
		3,715 50	
Collins, E. A., 1st Assistant Inspector of Mines, services .....	1,672 80		
Disbursements .....	1,146 74		
		2,819 54	
McMillan, J. G., 2nd Assistant Inspector of Mines, services .....		127 48	
Rogers, R. W., Topographer, services .....	1,750 00		
Disbursements .....	57 20		
		1,807 20	
McArthur, T. A., Inspector of Recorders' Offices, services .....	600 00		
Disbursements .....	444 03		
		1,044 03	
Coleman, Dr. A. P., Disbursements .....		165 10	
Barfoot, Thos. ....		167 89	
Bell, Wm. ....		251 35	
Parsons, A. L., Disbursements .....		101 90	
Rothwell, T. E., Disbursements .....		33 30	
Scott, John .....	600 00		
Disbursements .....	326 25		
		926 25	
<i>Carried forward</i> .....		35,771 49	397,771 59

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....	.....	35,771 49	397,771 59
MINES AND MINING.— <i>Concluded.</i>			
Sharpe, Donald .....	700 00	1,012 23	
Disbursements .....	312 23		
Smith, R. M. ....	375 96	405 96	
Disbursements .....	30 00		
Webster, Jas. E. ....	.....	27 00	37,553 94
Young, Roy W. ....	.....	197 50	
Express .....	.....	6 05	
King's Printer .....	.....	130 32	
Micklethwaite, F. W. ....	.....	3 39	
MINING RECORDERS.			
Bowker, S. T., Recorder .....	1,000 00	1,346 08	
Disbursements .....	346 08		
Campbell, C. A., Recorder .....	900 00	2,648 00	
Washburn, H. C., Clerk .....	720 00		
Glazier, M. B., Clerk .....	124 62		
Young, Miss E., Stenographer .....	505 00		
Disbursements .....	398 38		
Gauthier, G. H., Recorder .....	1,500 00	5,310 67	
Graham, F. W., Clerk .....	1,200 00		
Glazier, M. B., Clerk .....	450 00		
O'Brien, J. D., Clerk .....	1,020 00		
Disbursements .....	1,140 67		
Hough, J. A., Recorder .....	1,200 00	3,684 28	
Browning, A. J., Clerk .....	929 16		
Glazier, M. B., Clerk .....	450 00		
Gardiner, Miss I. M., Stenographer .....	451 00		
Disbursements .....	654 12		
McQuire, H. F., Recorder .....	500 00	664 08	
Disbursements .....	164 08		
Morgan, J. W., Recorder .....	1,000 00	1,313 70	
Disbursements .....	313 70		
Sheppard, H. E., Recorder .....	1,000 00	1,228 05	
Disbursements .....	228 05		
Skill, A., Recorder .....	1,200 00	1,357 15	
Disbursements .....	157 15		
<i>Carried forward</i> .....	.....	17,552 01	435,325 53

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		17,552 01	435,325 53
<i>MINING RECORDERS.—Concluded.</i>			
Smith, G. T., Recorder .....	2,300 00		
Meagher, T. J., Clerk .....	525 00		
Sarsfield, J. M., Clerk .....	1,100 00		
Ferguson, L. H., Clerk .....	959 96		
Monroe, Miss E., Stenographer .....	720 00		
Smith, Miss M. H., Stenographer .....	486 23		
Disbursements .....	1,034 69	7,125 88	
Spry, W. L., Recorder .....	682 20		
Disbursements .....	20 20	702 40	
Express .....	140 75		
Harcourt, E. H., Co. ....	72 86		
King's Printer .....	598 31		
Methodist Book Room .....	112 54	924 46	
			26,304 75
<i>PROVINCIAL ASSAY OFFICE.</i>			
McNeill, W. K. ....	1,714 10		
Disbursements .....	68 70	1,782 80	
Rothwell, T. E. ....	1,009 00		
Disbursements .....	350 60	1,359 60	
Supplies .....		343 20	
Disbursements .....		76 90	
			3,562 50
<i>CULLERS' ACT.</i>			
Currie, D. H., services .....		8 00	
McDougall, J. T., Disbursements .....		32 35	
			40 35
<i>Expenses not otherwise provided for.</i>			
Nicol, Wm., Salary and Disbursements <i>re</i> Toronto Exhibition .....		400 00	
General Disbursements <i>re</i> Toronto Exhibition....		137 30	
Nicol, Wm., <i>re</i> Windsor Exhibition, .....	55 00		
Disbursements .....	35 40	90 40	
			627 70
SURVEYS .....			89,123 51
BOARD OF SURVEYORS .....			200 00
EXPERIMENTAL TREATMENT OF ORE .....			200 00
REFUNDS—Miscellaneous .....		13,986 24	
do Algoma Central Railway .....		94,047 03	108,033 27
<i>Carried forward</i> .....			663,417 61



*Appendix No. 6.—Concluded.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			663,417 61
CONTINGENCIES.			
<i>Departmental.</i>			
Printing and Binding .....	2,139 40		
Stationery .....	5,909 41	8,048 81	
Postage .....	1,775 95		
Express .....	434 90	2,210 85	
Telegraphing .....	481 38		
Bell Telephone Company .....	38 55		
Car fare .....	40 00	559 93	
Subscriptions .....	309 40		
Advertising .....	3,673 92	3,983 32	
Typewriters, rent and repairs .....		215 25	
Hearst, Hon. W. H., Travelling expenses .....	300 00		
Rorke, L. V., Travelling expenses .....	97 69		
Stewart, A. M., Legal fees .....	110 00		
White, Aubrey, Travelling expenses .....	30 25		
Zavitz, E. J., Travelling expenses .....	246 75	784 69	
Extra Clerks .....	4,491 68		
Sundries .....	81 36	4,573 04	
BUREAU OF MINES.			20,375 89
Printing and Binding .....	2,467 30		
Stationery .....	3,715 30	6,182 60	
Postage .....	475 16		
Telegraphing .....	232 37		
Express and cartage .....	61 80		
Advertising .....	1,051 80		
Subscriptions .....	405 68		
Maps .....	2,685 90	4,912 71	
Gibson, T. W., Travelling expenses .....		35 35	
Typewriters, repairs, etc. ....	128 00		
Bell Telephone Company .....	8 60	136 60	
Legal fees .....	299 67		
Nicholas, F. J., Preparing index .....	255 00		
Sundries .....	436 20	990 87	
			12,258 13
			696,051 63

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister, Lands and Forests.

*Appendix No. 7.*

Statement of Expenses on account of various Services under the direction of the Department of Lands, Forests and Mines, for the year ending October 31st, 1913.

Service.	\$ c.	\$ c.	\$ c.
ALGONQUIN PARK .....			21,554 09
VETERANS' COMMUTATION .....			450 00
EXPLORATION PARTY IN NEW TERRITORY .....			- 2,932 64
NORTHERN DEVELOPMENT .....			
Whitson, J. F., Salary .....	4,000 00		
Bruce, A. E. D., do .....	1,969 81		
Stewart, L. D. N., do .....	1,418 24		
Lang, J. L., do .....	1,255 36		
Laird, R., do .....	1,133 33		
Chalmers, D., do .....	1,540 00		
Robinson, W. J., do .....	1,500 00		
Moore, J., do .....	1,449 99		
Mills, W. W., do .....	1,075 00		
Fraser, J., do .....	816 00		
Beardall, F. G., do .....	1,284 60		
Laidlaw, Miss B., do .....	428 33		
Extra Clerks .....	3,007 99		
		20,878 65	
Wages .....	611,746 72		
Contracts .....	114,409 02		
Supplies .....	334,137 89		
		1,060,293 63	
BOUNTY ACT VII., EDWARD VII., CAP. 14.			1,081,172 28
Coniagas Reduction Company .....		13,301 93	
Deloro Mining Reduction Company .....		998 07	
Dominion Refineries, Limited .....		62 59	
			14,362 59
			1,120,471 60

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

Appendix No. 8.

WOODS AND FORESTS.

Statement of revenue collected during the year ending October 31st, 1913.

	\$	c.
Amount of Western collections at Department.....	1,753,022	84
do Belleville collections " .....	19,454	12
do Ottawa collections.....	206,648	85
	1,979,125	81

J. A. G. CROZIER,  
Chief Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 9.*

## PATENTS BRANCH.

Statement of Patents, etc., issued by the Patents Branch from 1st November, 1912, to  
31st October, 1913.

Public Lands (late Crown) .....	822
“ “ (late School) .....	15
“ “ (late Clergy Reserves) .....	9
“ “ (University) .....	17
Free Grant Lands (A.A.) (This series now discontinued) .....	39
“ “ “ (Act of 1880) discontinued .....	212
“ “ “ (Act of 1913) .....	253
“ “ “ (Act of 1901) (Veterans) .....	926
Mining Lands .....	896
Mining do (University) .....	15
Mining Leases .....	263
Crown Leases .....	34
Licenses of Occupation .....	28
Temagami Leases .....	3
Pine .....	3
Total .....	3,535

CHARLES S. JONES,  
Chief Clerk.

AUBREY WHITE,  
Deputy Minister.



*Appendix*

## WOODS AND

## Statement of Timber and Amounts accrued from Timber Dues, Ground

## QUANTITY AND

Agencies.	Area covered by timber licenses.	Saw logs.			
		Pine.		Other.	
	Square miles.	Pieces.	Feet B.M.	Pieces.	Feet B.M.
Western Timber District .....	12,485 $\frac{3}{4}$	7,230,192	280,810,994	1,129,176	34,133,013
Belleville Timber District .....	957 $\frac{1}{4}$	73,071	1,838,987	295,791	9,815,144
Ottawa Timber District .....	4,076 $\frac{1}{4}$	1,259,035	56,152,030	583,617	14,755,269
	17,519 $\frac{1}{4}$	8,562,298	338,802,011	2,008,584	58,703,426

## General Statement

Agencies.	Cordwood.		Tan Bark.	Railway Ties.	Posts.	Poles.	Stave Bolts.	Pulpwood,
	Hard.	Soft.						
	Cords.	Cords.	Cords.	Pieces.	Cords.	Pieces.	Cords.	Cords.
Western Timber District .....	30,927 $\frac{1}{2}$	37,095	3,725	6,321,675	2	1,291	2,874	120,159
Belleville Timber District .....			78 $\frac{1}{2}$	1,399	75	957		13
Ottawa Timber District .....		1,999	705	32,754	12 $\frac{3}{4}$	2,473		11,262
	30,927 $\frac{1}{2}$	39,094	4,508 $\frac{1}{2}$	6,355,828	89 $\frac{3}{4}$	4,721	2,874	131,434

J. A. G. CROZIER,  
Chief Clerk in Charge

No. 10.

## FORESTS.

Rent and Bonus during the year ending 31st October, 1913.

## DESCRIPTION OF TIMBER.

Boom and Dimension Timber.				Square Timber.		Piling.			Cedar.
Pine.		Other.		Pine.					
Pieces.	Feet B.M.	Pieces.	Feet B.M.	Pieces.	Cubic feet.	Lineal feet.	Pieces	Ft. B.M.	Lineal feet.
97,489	13,041,766	52,299	3,831,073	10,349	511,490	512,640	10,627	701,061	122,907
1,411	223,611	4,692	874,773	.....	.....	.....	.....	.....	.....
15,328	2,192,700	7,142	786,703	.....	.....	.....	.....	.....	1,296
114,228	15,458,077	64,133	5,492,549	10,349	511,490	512,640	10,627	701,061	124,203

of Timber.—Concluded.

## Amounts accrued.

Transfer bonus.	Interest.	Trespass.	Timber dues.	Bonus.	Deposits timber sales 1913.	Ground rent.	Total.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
6,770 00	8,456 11	17,324 66	1,155,437 92	614,227 86	101,940 50	70,282 00	1,974,439 05
70 00	60 65	1,301 48	11,389 26	.....	.....	4,990 00	17,811 39
3,660 25	498 81	998 88	105,989 18	.....	.....	23,825 00	134,972 12
10,500 25	9,015 57	19,625 02	1,272,816 36	614,227 86	101,940 50	99,097 00	2,127,222 56

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 11.*

Statement of work done in the Military branch of the Department of Lands, Forests and Mines, during the year 1913.

References for Veteran Patents issued .....	844
Locations under military certificates .....	146
Certificates applied in payment of lands .....	34
Certificates surrendered for commutation money .....	9
Letters received .....	5,350
Letters written .....	5,160
Special letters to agents .....	800
Special letters to mining recorders .....	250
Maps and reports supplied to veterans .....	1,400
Printed forms .....	1,200
Copies of Veteran Act supplied .....	450

H. E. JOHNSTON,  
Chief Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

*Appendix No. 12.*

Statement of the number of Letters received and mailed by the Department in 1910-11, 1911-12 and 1912-13.

Year,	Letters received.					Names indexed.	Orders-in-Council.	Returned letters.	Letters, circulars and reports mailed from Department.
	Sales and Free Grants.	Surveys.	Woods and Forests.	Mines.	Totals.				
1910-11	24,705	14,478	9,212	8,220	56,615	63,200	180	94	67,150
1911-12	20,050	10,150	7,700	8,750	50,407	57,000	150	76	63,125
1912-13	27,658	11,775	7,219	8,800	55,452	61,500	150	75	65,280

FRANK YEIGH,  
Registrar,

AUBREY WHITE,  
Deputy Minister.

## Appendix No. 13.

Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties and of patents issued in Free Grant Townships during the year ending 31st October, 1913.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Baxter .....	Muskoka. ....	J. B. Brown, Bracebridge..	6	395	11	108	3	14
Brunel .....	"	"	5	500	.....	.....	2	1
Cardwell .....	"	"	1	106	.....	.....	3	2
Chaffey .....	"	"	3	297	.....	.....	3	3
Draper .....	"	"	.....	.....	.....	.....	.....	1
Franklin .....	"	"	3	479	21	70	6	19
Freeman .....	"	"	4	610	.....	.....	1	.....
Macaulay .....	"	"	.....	.....	.....	.....	.....	.....
Medora .....	"	"	1	95	3	1	2	4
Monck .....	"	"	.....	.....	1	1	.....	1
Morrison .....	"	"	3	377	8	167	.....	9
Muskoka .....	"	"	1	200	5	29½	1	3
McLean .....	"	"	3	491	1	1	1	1
Oakley .....	"	"	5	603	.....	.....	5	2
Ridout .....	"	"	2	273	.....	.....	1	3
Ryde .....	"	"	2	200	.....	.....	1	1
Sherborne....	"	"	4	451	1	15	1	2
Sinclair.....	"	"	3	458	.....	.....	2	2
Stephenson....	"	"	2	198	.....	.....	2	1
Stisted .....	"	"	1	60	1	½	1	3
Watt .....	"	"	1	97	1	25	.....	2
Wood .....	"	"	7	1,187	20	118	8	22
Burpee .....	Parry Sound..	F. R. Powell, Parry Sound.	3	600	.....	.....	.....	.....
Carling .....	"	"	11	1,700	1	44	7	5
Christie .....	"	"	13	1,611	.....	.....	9	2
Conger .....	"	"	16	2,306	.....	.....	13	2
Cowper .....	"	"	.....	.....	.....	.....	.....	5
Ferguson .....	"	"	.....	.....	.....	.....	1	.....
Foley .....	"	"	.....	.....	.....	.....	.....	1
Hagerman .....	"	"	2	201	.....	.....	1	2
Harrison .....	"	"	.....	.....	3	39	.....	11
Henvey .....	"	"	11	1,074	.....	.....	.....	.....
Humphrey .....	"	"	5	578	2	2	6	3
McConkey....	"	"	5	584	.....	.....	4	2
McDougall .....	"	"	6	896	2	2	3	3
McKellar .....	"	"	2	301	.....	.....	1	.....
McKenzie .....	"	"	.....	.....	.....	.....	.....	5
Monteith .....	"	"	6	844	2	2	2	7
Shawanaga .....	"	"	.....	.....	.....	.....	.....	11
Wilson .....	"	"	1	200	2	2	1	2
Chapman ....	Parry Sound .	Dr. J. S. Freeborn, Magnet- awan	4	447	3	108	6	4
Croft .....	"	"	3	500	.....	.....	1	1
Ferrie .....	"	"	.....	.....	.....	.....	.....	2
Gurd .....	"	"	6	832	.....	.....	4	7
Lount.....	"	"	2	200	.....	.....	2	1
Machar .....	"	"	7	1,196	1	147	9	4
Mills .....	"	"	8	1,315	2	19	1	2



## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Pringle .....	Parry Sound..	Dr. J. S. Freeborn, Magnet- awan.	11	1,748	3	94	2	1
Ryerson .....	"	" "	3	498	...	...	1	2
Spence .....	"	" "	1	113	...	...	1	4
Strong .....	"	" "	4	599	...	...	2	2
Armour .....	Parry Sound..	W. Jenkin, Emsdale. ....	4	428	1	7	5	1
Bethune .....	"	" "	3	511	...	...	1	...
Joly .....	"	" "	5	767	3	59	1	5
McMurrich ...	"	" "	3	551	...	...	1	2
Perry .....	"	" "	1	100	...	...	1	1
Proudfoot ....	"	" "	5	563	2	22	2	7
Hardy .....	Parry Sound..	H. J. Ellis, Powassan.. ....	3	300	...	...	1	1
Himsworth ..	"	" "	17	2,510	4	59	14	12
Laurier .....	"	" "	...	...	1	15	...	7
Nipissing .....	"	" "	6	869	8	35	4	9
Patterson .....	"	" "	2	200	1	8	...	1
Bonfield .....	Nipissing ....	W. J. Parsons, North Bay...	11	1,274	2	73	6	5
Boulter (pt) ..	"	" "	...	...	...	...	...	1
Chisholm .....	"	" "	15	1,686	...	...	7	16
Ferris .....	"	" "	27	2,947	5	104½	21	12
Anson .....	Haliburton ...	R. H. Baker, Minden.....	2	198	...	...	...	...
Glamorgan ..	"	" "	1	166	...	...	1	2
Hindon .....	"	" "	1	102	...	...	1	1
Lutterworth..	"	" "	6	602	2	92	3	4
Minden .....	"	" "	2	200	1	100	4	1
Snowdon .....	"	" "	3	300	...	...	1	2
Stanhope .....	"	" "	1	101	...	...	...	2
Anstruther ...	Peterboro'.	William Hales, Apsley .....	1	203	...	...	2	1
Burleigh, N.D.	"	" "	...	...	...	...	...	2
" S.D.	"	" "	...	...	...	...	...	1
Chandos .....	"	" "	2	245	...	...	2	2
Methuen .....	"	" "	...	...	...	...	1	...
Cardiff .....	Haliburton ...	James Wilson, Kinmount...	2	270	...	...	2	...
Cavendish....	Peterboro'....	" "	2	198	2	62	1	4
Galway .....	Peterboro'....	" "	11	1,294	2	53	2	3
Monmouth ...	Haliburton ...	" "	7	1,101	...	...	4	5
Bangor .....	Hastings ...	W. J. Douglas, Greenview....	4	468	...	...	3	1
Carlaw .....	"	" "	2	322	...	...	2	4
Cashel .....	"	" "	...	...	...	...	...	...
Dungannon ..	"	" "	4	407	3	277	2	...
Faraday .....	"	" "	4	439	...	...	2	3
Herschel .....	"	" "	10	1,306	1	4	5	6
Limerick .....	"	" "	1	172	...	...	1	...
Mayo .....	"	" "	7	515	...	...	5	3
Monteagle ...	"	" "	14	1,342	2	9	11	5
McClure .....	"	" "	7	951	...	...	6	2
Wicklow .....	"	" "	11	1,003	1	11	9	3
Wollaston....	"	" "	...	...	...	...	...	...
Algona, S....	Renfrew ....	Adam Prince, Wilno.....	2	119	...	...	1	2
Brougham ...	"	" "	8	904	1	30	...	3

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Brudenell ...	Renfrew ....	Adam Prince, Wilno.....	2	198	...	...	...	2
Burns .....	"	"	8	881	...	...	7	2
Grattan.....	"	"	1	204	1	4	1	1
Griffith .....	"	"	1	100	...	...	1	1
Hagarty .....	"	"	1	100	...	...	1	2
Jones .....	"	"	3	243	1	33	1	...
Lyell .....	Nipissing ....	"	1	50	1	200	...	1
Lyndoch .....	Renfrew .....	"	1	115	...	...	...	1
Matawatchan.	"	"	1	197	...	...	1	...
Radcliffe .....	"	"	5	617	1	49½	2	3
Raglan .....	"	"	3	356	1	50	1	1
Richards .....	"	"	6	636	1	8	4	2
Sebastopol ...	"	"	4	364	...	...	...	2
Sherwood .....	"	"	5	600	1	60	4	2
Algona, N....	Renfrew .....	Finlay Watt Pembroke.....	...	...	...	...	...	...
Alice .....	"	"	...	...	...	...	...	1
Buchanan (pt)	"	"	1	100	...	...	2	1
Fraser .....	"	"	3	502	1	11	...	1
Head .....	"	"	2	306	...	...	...	1
Maria .....	"	"	...	...	...	...	...	...
McKay (pt) ..	"	"	...	...	...	...	...	...
Petawawa ...	"	"	2	302	2	1	1	...
Rolph .....	"	"	3	400	1	21	...	1
Wilberforce ..	"	"	...	...	...	...	...	2
Wylie (pt)....	"	"	1	100	...	...	...	2
Calvin .....	Nipissing ....	Robert Small, Mattawa. ....	4	407	...	...	1	2
Cameron (pt) .	"	"	4	427	...	...	...	1
Lauder .....	"	"	2	292	...	...	...	...
Mattawan.....	"	"	3	405	...	...	1	2
Papineau ....	"	"	7	851	1	38	4	3
Korah .....	Algoma .. ...	Edw'd Noble, Sault Ste. Marie	1	80	...	...	1	...
Parke .....	"	"	...	...	...	...	...	...
Prince .....	"	"	2	268	1	50	1	6
Aberdeen ....	Algoma .....	Thos. Buchanan, Thessalon.	2	237	2	26	...	3
" add. ....	"	"	...	...	...	...	...	...
Galbraith.....	"	"	8	1,297	2	14½	1	2
Lefroy .....	"	"	...	...	1	159	...	2
Plummer .....	"	"	...	...	...	...	...	...
" add. ....	"	"	...	...	...	...	...	...
St. Joseph Is'd	Algoma .....	W. E. Whybourne, Marksville	13	1,158	...	...	12	1
Baldwin (pt.).	Algoma .....	Neil Mulvaney, Espanola...	7	840	6	24½	...	4
Merritt.....	"	"	12	1,641	2	64	3	6
Blake.....	Thunder Bay.	W. A. Burrows, Port Arthur	26	4,160	5	800	10	7
Commee .....	"	"	32	4,749	4	17	19	11
Crooks .....	"	"	29	4,472	5	299	12	2
Dawson Road.	"	"	63	7,467	10	426	42	...
Dorion .....	"	"	4	639	...	...	6	9
Gillies .....	"	"	8	1,274	...	...	7	4
Gorham.....	"	"	47	6,808	14	1,594½	45	15
Lybster .....	"	"	18	2,624	1	49	14	3
Marks.....	"	"	9	1,451	2	10½	7	5

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
McGregor ....	Thunder Bay.	W. A. Burrows, Port Arthur	37	5,800	6	494	31	....
McIntyre ....	"	"	1	160	2	63	....	3
O'Connor....	"	"	8	1,288	2	161 $\frac{1}{2}$	9	10
Oliver.....	"	"	6	966	...	...	5	4
Paipoonge, N R	"	"	...	...	...	...	...	4
" S R	"	"	5	500	2	5	2	9
Pardee.....	"	"	2	243	...	...	...	8
Pearson.....	"	"	43	6,845	1	120	13	2
Scoble.....	"	"	22	3,444	2	112 $\frac{1}{2}$	10	3
Strange.....	"	"	9	1,135	2	163	11	12
Ware.....	"	"	79	12,138	14	1,355 $\frac{1}{2}$	46	9
Atwood . . .	Rainy River..	William Cameron, Stratton..	...	...	...	...	...	...
Blue .....	"	"	14	1,842	8	214 $\frac{1}{2}$	11	4
Curran.....	"	"	1	161	...	...	...	...
Dewart.....	"	"	4	675	...	...	1	1
Dilke .....	"	"	1	162	1	2	1	....
Morley.....	"	"	5	645	5	88 $\frac{1}{2}$	5	2
Morson .....	"	"	37	5,692	26	1,258 $\frac{1}{4}$	29	....
McCrosson...	"	"	15	1,937	9	577	10	5
Nelles.....	"	"	8	1,124	5	250	7	2
Pattullo.....	"	"	9	1,116	3	95	3	7
Pratt .....	"	"	11	1,776	7	363	6	3
Rosebery .....	"	"	...	...	...	...	...	1
Shenston.....	"	"	...	...	6	152	...	4
Sifton .....	"	"	26	4,194	15	648	15	6
Spohn .....	"	"	8	1,409	4	123 $\frac{1}{2}$	4	7
Sutherland...	"	"	18	2,861	3	98	14	9
Tait .....	"	"	18	2,487	6	251	16	4
Tovell.....	"	"	15	2,312	8	461	12	4
Worthington..	"	"	1	112	1	16	1	1
Aylsworth ...	Rainy River .	Alex. McFayden, Emo .....	1	40	...	...	...	3
Barwick .....	"	"	...	...	...	...	...	...
Burris .....	"	"	9	1,375	2	59 $\frac{1}{2}$	8	5
Carpenter....	"	"	4	672	3	61 $\frac{1}{2}$	3	5
Crozier.....	"	"	7	1,083	...	...	7	4
Dance.....	"	"	12	1,930	1	79 $\frac{1}{2}$	12	5
Devlin .....	"	"	2	326	...	...	3	2
Dobie .....	"	"	9	1,281	3	59 $\frac{1}{2}$	8	8
Fleming .....	"	"	1	160	...	...	1	5
Kingsford...	"	"	11	1,639	2	36 $\frac{1}{2}$	8	4
Lash .....	"	"	...	...	1	40	...	1
Mather .....	"	"	6	991	4	525	5	2
Miscampbell.	"	"	17	2,799	1	39 $\frac{1}{2}$	18	1
Potts .....	"	"	18	2,901	4	322	21	12
Richardson...	"	"	5	798	3	199	6	1
Roddick.....	"	"	...	...	...	...	...	1
Woodyatt....	"	"	...	...	...	...	...	...
Aubrey ....	Kenora .....	R. H. Pronger, Dryden .....	8	1,173	...	...	7	3
Eton.....	"	"	11	1,666	...	...	8	5
Langton .....	"	"	5	768	...	...	...	...
Melgund .....	"	"	4	618	...	...	7	8
Mutrie.....	"	"	18	2,570	2	80 $\frac{1}{2}$	9	8
Rugby .....	"	"	...	...	...	...	...	7
Sanford.....	"	"	10	1,277	1	2	6	11
Southworth..	"	"	10	1,363	...	...	5	10
Temple.....	"	"	8	1,353	...	...	5	1

## Appendix No. 13.—Concluded.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Van Horne ...	Kenora .....	R. H. Pronger, Dryden... ..	2	168	2	190	3	15
Wabigoon ....	"	"	26	3,979	4	312	25	1
Wainwright ..	"	"	8	1,269	...	...	6	6
Zealand .....	"	"	22	3,059	3	60	14	8
Melick .....	Kenora .....	W. L. Spry, Kenora .....	14	2,208	1	53	41	2
Pellatt .....	"	"	15	2,032	6	264	13	5
Bleazard .....	Sudbury .....	J. A. Lemieux, Bleazard	4	465	5	10	1	10
Capreol ...	"	" Valley	10	1,684	4	1,042	5	3
Hanmer .....	"	"	8	1,138	1	81	2	2
Lumsden .....	"	"	6	683	...	...	1	4
Balfour .....	Sudbury .....	J. K. MacLennan, Sudbury ..	3	473	1	160	1	4
Broder .....	"	"	12	1,503	2	311	2	5
Chapleau .....	"	"	...	...	...	...	...	...
Dill .....	"	"	4	557	1	152	1	1
Garson .....	"	"	14	2,014	3	173	5	3
Morgan (pt) ..	"	"	2	241	...	...	...	1
Neelon .....	"	"	1	161	...	...	...	4
Rayside .....	"	"	1	82	...	...	...	2
Appelby .....	Sudbury .....	Emile Langlois, Warren .....	5	804	1	8½	2	2
Casimir .....	"	"	...	...	...	...	...	6
Dunnet .....	"	"	4	642	1	1½	...	2
Hagar .....	"	"	8	1,268	...	...	3	2
Jennings .....	"	"	4	510	2	2	...	3
Kirkpatrick ..	Nipissing ...	"	4	565	1	3	1	4
Ratter .....	Sudbury .....	"	3	484	...	...	...	1
Caldwell .....	Nipissing ...	J. A. Phillion, Sturgeon Falls.	9	1,239	1	33	...	9
Cosby .....	Sudbury .....	"	4	636	1	2	1	5
Grant .....	Nipissing ...	"	7	1,117	1	5	5	...
Macpherson ...	"	"	8	1,178	...	...	...	8
Martland ....	Sudbury .....	"	10	1,570	1	3	1	4
Springer .....	Nipissing ...	"	3	340	...	...	...	2
Abinger .....	Lennox and Addington	Charles Both, Denbigh .....	...	...	...	...	1	...
Canonto, S. ...	Frontenac ...	"	...	...	...	...	...	...
" N. ...	"	"	...	...	...	...	...	...
Clarendon .....	"	"	1	99	...	...	1	3
Denbigh ..	Lennox and Addington	"	1	200	...	...	2	2
Miller (pt.) ...	Frontenac ...	"	4	647	...	...	1	...
Palmerston (pt.)	"	"	...	...	...	...	1	...
McClintock ...	Muskoka ....	Unattached .....	3	450	3	77	...	5
Airy .....	Nipissing ...	"	1	202	1	99	1	...
Finlayson .....	"	"	...	...	1	73	...	1
Murchison ...	"	"	1	101	...	...	1	...
Sabine .....	"	"	5	708	3	300	3	4
			1575	221,255	418	18,017	1020	828

W. C. CAIN,  
Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.



*Appendix No. 14.*

Statement of Municipal Surveys for which instructions issued during the 12 months ending October 31st, 1913.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.
1	A. S. Campbell	687	Feb. 18th, 1913.	To survey the line between concessions 7 and 8 from lots 9 to 13, in the township of Hinchinbrooke, or as much farther on each side as an original post can be found.
2	Wilbert S. Gibson .....	688	Mar. 19th, 1913	To survey the allowance for road between the 1st and 2nd ranges, Credit Indian Reserve, south of Dundas St., township of Toronto, from the northwest angle of lot No. 8, 1st range, across lots Nos. 9, 10, 11, 12, 13 and 14 in the 1st range, and lots Nos. 6, 9 and 10 in the 2nd range, Credit Indian Reserve, and thence along the road allowance between the 2nd range, Credit Indian Reserve, and the 2nd concession of Toronto township south of Dundas St., being across part of lot 22, lot 23, lot 24 and lot 25 in the 2nd concession south of Dundas Street to the westerly limit of said lot 25, being the easterly limit of the allowance for road between lots Nos. 25 and 26, known as the "Lorne Park Road," and as regards the 2nd range on the northerly side of said road allowance, being across parts of lots No. 10, lots 11 and 12, and part of lot 13 in the 2nd range, Credit Indian Reserve, and to define said allowance for road by permanent stone or iron monuments planted on each side thereof.

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 15.*

Statement of Municipal Surveys confirmed during the 12 months ending October 31st, 1913.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.	Date when confirmed, under R.S.O. 1897, Chap. 181, secs. 10-15 inclusive.
1.	J. J. McKay, Tyrrell & McKay..	680a	July 27th, 1910	To survey certain concessions, road allowances, etc., formerly in the township of Barton, now in the city of Hamilton, as follows:—Barton St. from Sherman Ave. to the allowance for road between lots Nos. 2 and 3 of the township of Barton now in the city of Hamilton. Main St. from Sherman Ave. to Ottawa St. The allowance for road between the 3rd and 4th concessions of Barton now in the city of Hamilton from Ottawa St. westerly to the city limits. Sherman Ave. from the brow of the mountain northerly to the base line. Trolley St. from the brow of the mountain northerly to Burlington Bay. Ottawa St. from the brow of the mountain northerly to Burlington Bay. Allowance for road between lots 2 and 3 from the city of Hamilton Water Works pipe line to Barton St., and to plant durable monuments at the front and rear of the said portions of the concessions and allowances for road between lots in the city of Hamilton, and at the front and rear angles of the lots therein, also to plant durable monuments at the front and rear of the following portions of concessions and allowances for road between lots in the city of Hamilton, and at the front and rear angles of the lots therein:—From the eastern limit of Lakeview Ave. to the head of the Strongman Mountain Road. From Bay St. to allowance for road between lots 20 and 21, known as Paradise Road. Paradise Road from Aberdeen Ave. to Marsh known as Coot's Paradise.	Aug. 6, 1913
2.	A. S. Campbell....	687	Feb. 18th, 1913.	To survey the line between concessions 7 and 8 from lots 9 to 13 in the township of Hinchinbrooke, or as much farther on each side as an original post can be found.	Oct. 22, 1913

*Appendix No. 15.—Continued.*

Statement of Municipal Surveys confirmed during the 12 months ending October 31st, 1913.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.	Date when confirmed, under R.S.O. 1897, Chap. 181, secs. 10-15 inclusive.
3	J. H. Moore ....	628	Sept. 14th, 1900	To survey the boundary line between the townships of Montague and Beckwith, in the county of Lanark, and to plant stone or other durable monuments on each side of the road allowance in such positions as shall define the true boundary between said townships.	Dec. 14, 1912

GEORGE B. KIRKPATRICK,  
Director of Surveys.AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 16.*

Statement of Crown Surveys in progress during the 12 months ending October 31st, 1913.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount Paid.
1	July 4, 1912..	Patterson & Bryne	Survey of Township of Drayton, District of Kenora .....	5,000 00
2	July 15, 1913.	J. R. Allen .....	Survey of part Township of Mattawan, District of Thunder Bay .....	2,500 00
3	July 7, 1913.	David Beatty ...	Survey of Township of Lowther, District of Algoma .....	4,300 00
4	June 30, 1913.	H. J. Beatty ....	Survey of Township of Schofield, District of Algoma .....	4,000 00
5	July 10, 1913.	J. K. Benner ....	Survey of Timber Berths in the District of Thunder Bay .....	3,000 00
6	July 19, 1913.	J. S. Dobie .....	Survey of Township outlines, Districts of Sudbury and Algoma .....	3,000 00
7	July 2, 1913.	J. W. Fitzgerald.	Survey of Township of Caithness, District of Algoma .....	3,500 00
8	July 4, 1913.	C. H. Fullerton..	Survey of Township of O'Brien, District of Timiskaming .....	3,000 00
9	July 3, 1913.	J. R. Gill .....	Survey of Township of Talbot, District of Algoma .....	3,000 00
10	June 30, 1913.	Lang & Ross ....	Survey of Township of Orkney, District of Algoma .....	3,500 00
11	July 9, 1913.	T. J. Patten ....	Survey of Township of Shetland, District of Algoma .....	2,800 00
12	July 12, 1913.	Speight & Van Nostrand .....	Survey of Township of Ebbs, District of Algoma .....	3,500 00
13	July 19, 1913.	Sutcliffe & Neelands .....	Survey of outlines of townships, District of Kenora .....	1,000 00
14	Aug. 14, 1913.	Sutcliffe & Neelands .....	Survey of Township of Malachi, District of Kenora .....	2,000 00
15	Apr. 18, 1913.	A. L. Russell ...	Survey of land adjoining and north of Townships of Ware, Gorham and McGregor, District of Thunder Bay .....	2,900 00
16	July 17, 1913.	McAuslan & Anderson .....	Survey outlines, District of Kenora .....	2,500 00
17		James Hutcheon .	Inspection of Surveys .....	500 00
				50,000 00

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.



*Appendix No. 17.*

Statement of Crown Lands surveyed, completed and closed during the 12 months ending  
October 31st, 1913.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of Acres.
				\$ c	
1	May 14, 1912	Lang & Ross ....	Survey of township outlines, District of Algoma .....	621 39	
2	May 20, 1912	Speight & Van Nostrand .....	Survey of township outlines, District of Algoma, and township of Mulloy .....	2,193 90	51,849
3	May 20, 1912	H. J. Beatty ....	Survey of township outlines, District of Algoma .....	764 23	
4	May 21, 1912	Andrew Bell ....	Survey of township of Sargeant, District of Timiskaming .....	1,285 17	36,851
5	May 22, 1912	J. Hutcheon ....	Survey of township of Shackleton, District of Timiskaming .....	942 00	54,420
6	May 21, 1912	C. H. Fullerton ..	Survey of township of Stoddart, District of Algoma .....	1,417 90	52,017
7	May 21, 1912	J. W. Pierce ....	Survey outlines of townships, District of Algoma .....	890 52	
8	May 27, 1912	D. J. Gillon ....	Survey of township of Mathieu, District of Rainy River.....	385 90	26 859
9	July 9, 1912	J. W. Fitzgerald .	Survey of township outlines, District of Sudbury .....	277 18	
10	June 10, 1912	T. J. Patten .....	Survey of township outlines, District of Algoma .....	1,073 55	
11	May 29, 1912	H. O. Dempster ..	Survey of part of the township of Nansen, District of Timiskaming	1,690 77	34,907
12	July 17, 1912	McAuslan & Anderson .....	Survey of township of Way, District of Algoma .....	1,490 40	51,534
13	June 5, 1912	G. P. Angus ....	Survey of part of township of Hanlan, District of Algoma .....	1,657 50	34,575
14	June 13, 1912	Cavana & Watson	Survey of township outlines, District of Algoma .....	880 00	
15	June 17, 1912	E. D. Bolton ....	Survey of Dawson road lots, District of Thunder Bay .....	234 65	
16	July 17, 1912	A. S. Code .....	Survey of township outlines, and township of Studholme, District of Algoma .....	685 50	51,855
17	June 24, 1912	Coltham & Coltham .....	Survey of part of township of Casgrain, District of Algoma .....	660 90	34,609
18	Oct. 10, 1912	C. H. Fullerton ..	Survey of timber berths in township of Mulligan, District of Timiskaming .....	370 28	
19	June 10, 1912	C. E. Fitton ....	Inspection of Surveys, 1912,	1,685 46	
20	Nov. 19, 1912 Dec. 4, 1912 Jan. 23, 1913 Feb. 17, 1913	E. Seager .....	Survey of timber berths in District of Kenora .....	4,049 07	
21	Jan. 22, 1913	Speight & Van Nostrand .....	Survey islands in Cache Lake, in Algonquin Park .....	535 48	
22	Nov. 25, 1912	McAuslan & Anderson .....	Survey Timber Berth A, District of Nipissing .....	115 25	
23	June 10, 1912	D. Beatty .....	Survey part of township south of Henvey Indian Reserve, District of Parry Sound .....	708 90	
24	Nov. 21, 1912	A. Loughheed ....	Survey timber berths in District of Thunder Bay .....	2,005 00	
25	Nov. 29, 1912	E. R. Bingham ..	Survey parts township of Blake and Crooks, District of Thunder Bay .....	2,696 45	

*Appendix No. 17.—Continued.*

Statement of Crown Lands surveyed, completed and closed during the 12 months ending  
October 31st, 1913.—Continued.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of Acres.
				\$ c.	
26	June 17, 1912	E. D. Bolton ...	Survey Dawson road lots, District of Thunder Bay .....	260 00	
27	Dec. 2, 1912	J. F. Whitson ...	Survey addition to town plot of Hearst .....	47 10	
28	May 29, 1912	J. W. Fitzgerald .	Survey at Hay Bay, township of Fredericksburg .....	427 60	
29	July 19, 1912	David Beatty ...	Survey township of Fauquier, District of Timiskaming .....	1,086 10	34,861
30	Apr. 28, 1913	J. S. Dobie .....	Making report on land adjacent to line of Lake Huron and Northern Ontario Railway .....	125 00	
31	Oct. 18, 1913	McAuslan & Anderson .....	Survey of lot 34, concession 16 township of Ferris .....	10 00	
			Maurice Derouard, draughtsman on DeMorest & Stull's survey of islands in Lake of the Woods...	166 35	
			Maurice Derouard, draughtsman on DeMorest & Stull's survey of islands in Lake of the Woods...	56 35	
			Maurice Derouard, draughtsman on DeMorest & Stull's survey of islands in Lake of the Woods...	150 00	
			Geo. Blair, inspecting land north of Dorion township, District of Thunder Bay .....	55 00	
			Rice Lewis & Son, iron posts .....	315 00	
			E. H. Harcourt & Co., lithographing	6,373 00	
			C. Tarling & Co., mounting maps..	643 21	
			Wm. Margach, on account of survey of Lake of the Woods .....	55 45	
			J. W. Stone, storage of launch.....	36 00	
				39,123 51	464,337 .

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 18.*

## SURVEY OF BASE AND MERIDIAN LINES, DISTRICT OF ALGOMA AND THUNDER BAY.

TORONTO, December 30th, 1912.

SIR,—We have the honour to submit the following report on the survey of certain township outlines in the Districts of Algoma and Thunder Bay made by us during the past summer under instructions from your Department, dated the 20th of May, 1912, with accompanying projected maps.

Upon receipt of the instructions, we immediately proceeded to make arrangements for supplies. With six men from Toronto and vicinity we left for Cochrane, the terminal of the Timiskaming and Northern Ontario Railway on 4th June, and upon our arrival were joined by ten men from Chapeau and Heron Bay. Three additional men joined the party after the work had been commenced, and this was the maximum force used during the season's operations.

The work was in charge of T. B. Speight, O.L.S., assisted by John van Nostrand, O.L.S., and N. A. Burwash, O.L.S.

From Cochrane we proceeded to Mileage 44, District E, on the National Transcontinental Railway.

The instructions give the point of commencement as the north-east angle of the township of Boyce, but as the survey was made in conjunction with the subdivision of the township of Mulloy, the last-mentioned township being surveyed under instructions from your Department, of even date, it was found necessary to begin the work on the lines adjoining the township of Mulloy in order to avoid the extra moving of supplies and camp outfit.

A beginning was made on the 13th June at the south-west corner of the township of Mulloy and the boundary between the townships of Shuel and Mulloy was run north for a distance of nine miles, crossing the centre line of the right of way of the National Transcontinental Railway, as constructed on the ground, at four miles seventy-one chains and eleven links. This boundary was completed on 18th June and the party then proceeded with the subdivision of the township of Mulloy.

On 8th July one half of the party proceeded to the south-west corner of the township of Mulloy and ran the boundary between the townships of McCoig and Kohler, nine miles south. Upon the completion of this line the two parties joined in the township of Mulloy.

On 16th July the combined parties proceeded to mileage fifty-two of District E., on the National Transcontinental Railway, and on the following day began to run the boundary between the townships of Burrell and Shuel east from the north-east corner of the township of Boyce.

This line was completed on the 26th July and was run a full nine miles. It intersected the centre line of the right of way of the National Transcontinental Railway, as constructed on the ground, at one mile, fifty-one chains and eighty-two links east of the north-east corner of the township of Boyce. It was intersected by the boundary between the townships of Shuel and Mulloy at one chain and eleven links west of its eastern extremity and intersected the last-mentioned boundary at nine miles and seventy-four links.

The east boundary of the township of Burrell was then run north from the end of the last mentioned line, *i.e.*, from a point one chain and eleven links east of the north-west corner of the township of Mulloy.



One half of the party ran north on this line, the remainder continuing the survey of the township of Mulloy.

The north boundary of the township of Mulloy was run in conjunction with the sub-division of the township. It was run a full nine miles from the south-east corner of the township of Burrell, and was intersected by the east boundary of the township of Mulloy, at eight miles, seventy-six chains and seventy-eight links.

On 26th August a beginning was made at the north-east corner of the township of Boyce, and the boundary between the townships of Bicknell and Burrell was run nine miles north. It intersected the centre line of the right of way of the National Transcontinental Railway at seventy-three chains and ninety-three links north of the north-east corner of the township of Boyce.

The north boundary of the township of Burrell was then run nine miles east and was intersected by the east boundary of the township of Burrell, one chain and thirty-three links from its eastern extremity, and it intersected the last mentioned boundary at eight miles, seventy-nine chains and eighty-six links.

Returning to the north-west corner of the township of Burrell, the north boundary of the township of Bicknell was run west from this point to the boundary between the districts of Algoma and Thunder Bay, a distance of ten miles, sixty-three chains and thirty-nine links.

The intersection of these lines was four chains and one link south of Mile Post CIII., planted by A. Niven, O.L.S., in 1907.

From the above intersection the north boundary of the township of Henderson, in the District of Thunder Bay, was run nine miles west.

From a point on this line eight miles, seventy-eight chains and twelve links west of the boundary between the Districts of Algoma and Thunder Bay, that distance making allowance for the convergence of meridians, the west boundary of the township of Henderson was run south to a base line run by T. B. Speight, O.L.S., in 1908.

It was intersected by this base line at nine miles one chain and fifty-two links, and intersected the base line at nine miles exactly. It was also intersected by the centre line of the right of way of the National Transcontinental Railway at three miles, twenty-eight chains and thirty-nine links, south of the north-west corner of the township of Henderson.

All meridians were run due north (or south) astronomically, and the base lines were run due west (or east) on nine mile chords of parallels of latitude. Wooden posts of the most durable material within a reasonable distance of the line, were planted at intervals of one and a half miles, and, in addition, iron posts, one and seven-eighths inches in diameter, were planted alongside the wooden posts, at all intersections of township boundaries, except at the south-east corner of the township of Burrell, and on productions of lines beyond intersections.

On each wooden and iron post the number of the mile it represented was carefully marked on the side nearest the initial point of the line, also on the wooden and iron posts situated at township corners, the name of the township or townships, was marked.

In all cases where wooden and iron posts are planted side by side, the iron post indicates the intended corner.

All lines were well opened out and properly blazed.

Frequent astronomic observations, records of a number of which are appended, were taken for the purpose of verifying the course of the lines run. The magnetic variation was frequently noted, the average declination being 4 degrees west.



The country embraced by this survey has a total depth of twenty-seven miles, north and south, and a total breadth of thirty-seven and three-quarters miles, east and west.

#### SOIL.

Except for a small area of gravel on the north boundary of the township of Mulloy, the soil is clay, containing a small percentage of gravel in most places, and in a few small areas boulders occur. Gravel and sand deposits have been discovered and used in the construction of the National Transcontinental Railway, sidings having been put in at the townships of Shuel and Bicknell. Generally speaking the country will be excellent agricultural land when cleared and drained.

#### TIMBER.

The greater part of the timber on the west boundary of the townships of McCoig and Mulloy, the north boundary of the township of Mulloy and the easterly six miles of the north boundary of the township of Burrell, is burned, the timber being dead and in a great many places still standing, the second growth not having advanced very far.

On the remainder of the lines the timber is the average spruce, poplar and tamarac of the clay belt, with occasional small cedars and a few white birch and balsam.

On the westerly half of the north boundary of the township of Henderson, and on the south half of the west boundary of that township, the timber is second growth about thirty years old and is of very little value.

In the river valleys occasional small areas of spruce of fair size and quality were met with, and many ties for use on the railway have been taken out.

As mentioned above, canoeable streams occur about every ten to fifteen miles, east and west, running to the north-east. They are shallow and swift with gravel bottoms. With the exception of two cases on the Bad River, no falls were seen, although there are small rapids and riffles about every quarter of a mile. Lakes were conspicuous by their rarity.

#### MINERALS.

No indications of economic mineral were noticed and the only outcroppings of rock seen were pegmatite and a slightly schistose green rock which occur on the west boundary of the township of Mulloy, near the IM and VIM posts, also certain granite outcroppings, described in detail in our report upon that township.

#### GAME.

There are a few moose in this district. On most of the small streams fresh beaver cuttings were seen. In the rivers and small streams partridge, prairie chicken and rabbits are fairly numerous. The prairie chicken were found chiefly in the open muskegs and burnt low lying areas. Brook trout and pickerel were fairly abundant and some good pike were caught in the Pegatchewan River.

## GENERAL DESCRIPTION.

Generally speaking the surface is level and in places undulating. The main streams which drain the area are the Pegatchewan, Bad, Trout, Dog and Flint Rivers.

The river valleys are narrow and range from ten to fifty feet below the general level of the surrounding country. Much of the land appears wet, but except on the boundary between the townships of Bicknell and Burrell, where from Mileage 5 to 8, a large muskeg occurs, we found nowhere more than eighteen inches of moss and peat, and on the higher ground not more than three inches. In our estimation sixty-five to seventy per cent. of the land embraced by the survey may be classed as good farm land, and when access by means of the railway is completed settlement will begin. The whole of this district lies within the clay belt.

Canoeable rivers having a few small tributaries occur about every ten to fifteen miles east and west, and flow in a north-easterly direction. Few lakes were seen.

The southern and eastern part of the tract surveyed was burned about ten to fifteen years ago, and nearly all the timber destroyed. On the remainder of the tract the timber is the average timber found on the clay belt.

Accompanying this report are a plan and field notes of the entire survey, also accounts in triplicate.

We have the honour to be, Sir,

Your obedient servants,

(Sgd.) SPEIGHT & VAN NOSTRAND,

*Ontario Land Surveyors.*

The Honourable the Minister of Lands, Forests & Mines,  
Toronto, Ontario.

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*Appendix No. 19.*

SURVEY OF TOWNSHIP OUTLINES, DISTRICT OF ALGOMA.

ORILLIA, December 12th, 1912.

SIR,—With the object of carrying out your instructions for the survey of certain township outlines in the District of Algoma, bearing date the 13th of June, 1912, our party left Missinaibi with the necessary equipment for the work on the 25th of July following. The route followed was up the east arm of Dog Lake; thence across a short portage into Crooked Lake, where another short portage leads into Missinaibi Lake; and thence to the Missinaibi River, down which we travelled to a point where this last stream crosses the meridian run by O.L.S. Speight in 1910, between XVIM. and XVII. M. posts on that boundary. Such supplies as were required for that purpose were then taken by canoe up

the small creek entering the main river near this point, and which we found to be navigable with some difficulty, to near the crossing of our first base line commencing at the post at XV. M. on above meridian. The survey of the first base line was commenced from the above post. The main part of the supplies were taken on down the river to the portage leading from the Missinaibi to the Fire River at a point about three-quarters of a mile above the crossing of our second base line run from XXIV. M. Where this portage leaves the river the country has been burned over for some distance back and the trail was blocked with heavy windfall. We found it necessary to cut this portage out in order to transport canoes and supplies across to the Fire River. This portage is about two and a quarter miles in length, and with the exception of the first part, where there is a steep rise for fifteen chains or so, is comparatively level. The latter river affords a good canoe route with few obstructions as far as followed, and also furnishes abundant exercise in making headway against its stiff current. At about a mile west of our first meridian the Fire River is joined by a fair-sized creek known as Pajogwin Creek, which flows from a lake of the same name. The latter creek was used for transport for a distance of about one and a half miles north of our second base line where a portage two miles long leads to the southerly end of the above lake. This lake is crossed near its northerly end by the Canadian Northern Railway, and the creek entering it from the west is followed closely by that line. From this lake westerly to Lake Minnapooka it is mostly a case of portage, as the creek is shallow and rocky. From the westerly arm of the narrow recurved lake known as Minnapooka and at its northerly extremity a portage route leads northerly to a small lake known as Bommerang Lake, and thence westerly through a series of small lakes or ponds into Lake Imnokguameguea, a long narrow lake lying nearly north and south and debouching north through a small river of the same name. Travelling south on this last mentioned lake, which is crossed by our third base line near VI. M. on the south boundary of Walls, a portage route leads across to the Oba River and thence into Oba Lake and Loch Alsh, and from the latter there is a portage into a creek flowing into the west arm of Dog Lake. This route was followed on our return trip after completing the survey bringing us back to Missinaibi from the west.

Our first base line was commenced from the point marked by iron and spruce posts at XV.M. on the meridian run by O.L.S. Speight in 1910, and run due west astronomically for a distance of nine miles. From the latter point our first meridian was turned due north and run to the intersection with our second base line and thence continued for nine miles north of the latter base and our third base line turned due west and run through to the meridian run by O.L.S. Patten in the current season. Our second base line was run due west from the post planted by O.L.S. Speight in 1910 and marked 47 chains on the east bank of the Missinaibi River, said post being planted on a line run due west from XXIV.M. on the meridian by O.L.S. Speight in 1910, and continued west a distance of nine miles from the intersection of our first meridian and from the last mentioned point our second meridian was turned due north. Our fourth base line was turned due west from a point on our second meridian distant eighteen miles north of our second base line and run to intersect the meridian run by O.L.S. Speight in 1910 continued south by O.L.S. Patten during the current season and forming the westerly boundary of the township of Walls. On meridian and base lines so run, wooden posts six inches square were planted at intervals of one and one-half miles dating from the initial points at the intersections of base and



meridian to the south or east and were marked with the mileage from such initial points. At the intersection of base and meridian lines forming the township corners, iron posts one and one-quarter inches in diameter were planted beside the wooden posts and marked with the township names on the side facing diagonally into the township or townships in question. When the point where such post should be planted fell in a lake or other inaccessible place, the post was planted at the nearest available point on the line and marked with its correct chainage from the initial point. With the exception of the few instances where these were not available, bearing trees were marked to witness the posts so planted and their relative positions recorded in the field notes.

The country traversed by the survey occupies the dim borderland between the clay belt proper and the rock section to the south, and in its general features well reflects its composite character. While there are few hills that attain a height of more than twenty-five feet or thirty feet and these seldom rise with any great abruptness, the country generally presents a decidedly rolling surface, drift covered throughout the greater part of its area and with occasional rock outcrops and rocky sections. The Missinaibi River flows north through the easterly part of the township of Hayward, crossing and recrossing the easterly boundary, and nowhere in its course greatly over a mile therefrom. This stream, forming one of the main branches of the Moose River is too well known to need an extended description and the abundant water powers along its course will doubtless make it still more widely known in the future. Aside from the Missinaibi the most important stream met with is its tributary the Fire River, which is crossed by our second base line between two and one-half and two and three-quarter miles west of the former river and flows for some distance nearly parallel therewith. This last stream is from a chain to a chain and a half wide with strong current and affords a good waterway for canoes. At the place where the portage from the Missinaibi River comes out there is a fall of about six feet in this river and about six chains further down stream another fall of great beauty. The latter is about twenty-five feet in height, dropping through a narrow rock gorge into a circular basin of about seven chains in diameter, from which the stream emerges through a narrow rock opening of some ten feet in width. Forming the rim of this basin the rock rises precipitately to a height of forty feet or more, the whole forming a scene that imprints itself strongly on the memory and is well worth travelling some distance to see. From the commercial standpoint this fall would permit of power development at a minimum of cost.

The country is covered with the characteristic forest growth of this latitude and surface configuration. The timber values as a whole are not relatively high; but a great deal of material in the form of spruce, poplar, balsam and jack pine could be harvested from the area which has not been visited by fire. The greater proportion of this timber would probably be found more valuable for pulpwood than for milling purposes. In the south-westerly part of Hayward, extending westerly from the Greenhill River across the westerly boundary of the township and northerly about three miles the timber is heavy and composed of jack pine, spruce, birch, and balsam, carrying a thick undergrowth of moosewood and hazel. The same character, but with the trees much more scattered, applies to the south-westerly portion of Legge. A narrow belt of jack pine in length and size to cut four tie lengths is crossed by the meridian forming the west boundary of Legge within easy hauling distance of the railway line. Cedar of commercial size is scarce. One clump running from twelve to twenty-four inches in diameter and



suitable for poles up to thirty-five feet in length was passed through on the easterly boundary of Walls near IIM., and another similar character near the north-east angle of that township. Fire has wrought much mischief through the section, its ravages being most noticeable along the second base line from the Missinaibi River to Pajogwin Creek. The whole westerly part of Walls extending from Imnokguameguea Lake to the north-east angle of the township is composed of an old brule growing up with small jack pine, poplar, birch and balsam, save where the original swamps have resisted the advance of the fire. Great credit is due to the manner in which the clearing and burning of the right of way of the Canadian Northern Railway, which takes a diagonal course from south-east to north-west through the townships embraced in the survey, has been performed; the green avenues of trees, except in places which had been previously burnt over, forming a most cheerful contrast to the conditions encountered along the older lines.

From an agricultural standpoint this section is inferior and until such time as the wide area of good land included in the clay belt proper lying to the north is fully occupied it will probably be found more valuable as a constituent part of a forest reserve than for settlement purposes. The soil is mostly composed of a clay sand mixture, usually with the clay largely predominating. From this it varies from clay loam to sandy loam, with from one to six inches of black mould as a surface covering. It is generally stony and in many places boulder strewn. The parts offering the best inducements for agricultural development appear to be along the northerly part of Legge and the brule section in the westerly part of Walls. Along the Canadian Northern right of way, where it has been found necessary to make cuts in the muskeg or swamp areas, the muck surface is found to be underlaid by boulders, and this is probably true throughout the section.

To the hunter or angler this part offers abundance of sport in quest of the lordly moose, who finds it a congenial habitat, or in angling for the wary trout. The speckled trout is abundant in Fire River and we believe in some other streams of the district as well, and may be taken to a weight of at least three pounds. When the railway now under construction is completed it will offer easy access to a sporting country of high rank.

We have the honor to be, Sir,

Your obedient servants,

(Signed) CAVANA AND WATSON.

*Ontario Land Surveyors.*

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 20.*

## SURVEY OF TOWNSHIP OUTLINES, DISTRICT OF ALGOMA.

SAULT STE. MARIE, ONT., November 4th, 1912.

SIR,—We have the honor to submit the following report on the survey of outlines of certain new townships north of Hobon Junction on the Canadian Pacific Railway in the District of Algoma, made by us under instructions from your Department dated May 14th, 1912.

We arrived at Loch Alsh on the morning of May 18th, with men and supplies ready to commence and completed our work on July 10th. On the morning of May 19th we moved up Wabatoncashene Lake some eight or nine miles to the place of beginning and commenced our survey late in the afternoon of the same day.

Commencing at the 144th mile post on O.L.S. Niven's base line on the shore of Wabatoncashene Lake we ran due west astronomically nine miles, marking our posts in Arabic figures on the east side, "145" up to "153" planting one post at the end of each mile. At this point we connected our line with a post planted by O.L.S. Stewart as the approximate north-east angle of Township 51 by a line.

We then ran north astronomically from this 153rd mile post 24 miles and planted posts at the end of each mile until the 6th mile and north of that point at the end of each mile and a half. At the end of the 147th mile on the base line we ran due north astronomically six miles more or less, planting posts at the end of each mile and marking them on the south side in Roman numerals with the number of miles the said posts are north of the production of Niven's base line. From the end of the 6th mile on our 1st meridian we ran a line due east astronomically nine miles, planting posts at the end of each mile and a half and numbering them on the west side. From a point on our 1st meridian 15 miles north of the 153rd mile post on the production of Niven's base line, we ran our 3rd base line east astronomically to Oba Lake, and from the end of the 24th mile post on our 1st meridian we ran our 4th base line east astronomically to Oba River. From the end of the 9th mile on our 2nd base line we then ran our 2nd meridian due north astronomically 18 miles, planting posts at the end of each mile and a half. We then produced our 3rd and 4th base lines east astronomically to a distance of nine miles net east of our 2nd meridian.

At the angles of each of the townships and at the eastern ends of our 3rd and 4th base lines along side the wooden post we have planted an iron post, one and one half inches in diameter and three feet long, a tube, forged at the top, pointed at the bottom and painted red and in each case marked with the names of the adjacent townships with a cold chisel. At all crossings of the Algoma Central Railway we have tied our lines with the mileage on the railway as shown us by the Company's Engineers.

## PHYSICAL FEATURES.

The entire area which we covered with those lines south of the north end of Oba Lake was very rugged and for the most part covered very thickly with small birch and poplar. Abrupt granite hills thickly covered with large boulders and gravel, run in all directions, divided by very deep valleys. To the north of Oba Lake the country slopes to comparatively level clay land and easily drained muskegs

with rocky outcroppings here and there. In the more westerly portion of our work we encountered a great number of small lakes, but toward the east there were very few; so much so that we were unable to use our canoes at all for purposes of transportation. Wabatongashene and Oba Lakes have heretofore been surveyed by your Department, so mention of them would be superfluous. There is a chain of lakes starting near Hobon and connecting with the north end of Wabatongashene Lake. A river emptying into the north-east bay of this lake drains a chain of lakes lying to the north-east. Spruce Creek which runs into Oba Lake at the extreme north end from the east drains several large lakes lying some seven miles to the east of Oba Lake.

### SOIL.

In the valley of the Oba River only did we encounter arable land. In this section there is strong clay loam of very considerable depth. It is adaptable in every way to farming; more particularly as it requires very little clearing, as it has been swept a second time by fires within the past six years.

### TIMBER.

The timber is almost a negligible quantity. Nine-tenths of the country has been burnt over some years ago, and only along the shores of some of the lakes and in the swamps are stands of commercial timber to be found. This burnt area has grown up very thickly with white birch and poplar which to-day average about twenty feet in height. Such jack pine and cedar as there was has been largely cut within the past year for ties, trestles, etc., for the construction of the Algoma Central Railway north of Hobon. Around the shores of Wabatongashene Lake there was a considerable quantity of Jack pine averaging twelve inches in diameter, also around the lakes which the Algoma Central Railway parallels for the first twelve miles north of Hobon. In short, timber of any commercial value is so scattered and in such small quantities as to be hardly worthy of mention.

### WATERS.

The main water way is of course the Oba River, Oba Lake, and Wabatongashene Lake. These two lakes are connected at present by a monorail tramway owned by the Superior Construction Company, but previously a small stream was used on which it was necessary to make three portages. The Oba River as far north as we went is easily navigable for canoes. From the north end of Wabatongashene Lake one can reach Hobon through a series of lakes and small streams. This, however, is very difficult route at low water. By means of Spruce Creek which runs into the north end of Oba Lake it is possible to cross over to the waters of Missinabi River. On our west meridian we encountered the edge of Magpie Lake, which is the gateway to another large system of water ways. On this meridian we crossed numerous small lakes, but none of them are worthy of mention in this connection.

### FISH AND GAME.

The rivers and lakes as far as we were able to ascertain contain pickerel, pike and white fish, and in some places on the Oba River we understand there are



quantities of speckled trout. We saw signs of both moose and red deer, but we do not consider that they are very plentiful in the country. Everywhere we found partridge and rabbits in great numbers.

Accompanying this report we submit plans and field notes and account in triplicate.

We have the honor to be, Sir,

Your obedient servants,

(Signed) LANG AND ROSS,

*Ontario Land Surveyors.*

The Honorable the Minister of Lands, Forests and Mines.

Toronto, Ont.

N.B.—The average magnetic variation for the ground covered by us was 4 deg west.

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*Appendix No. 21.*

TOWNSHIP OUTLINES, DISTRICT OF ALGOMA.

PEMBROKE, December 28th, 1912.

SIR,—I have the honor to submit the following report on the survey of certain township outlines in that portion of the District of Algoma lying between the Trout and Kapuskasing Rivers on the east and the Missinaibi River on the west, performed under instructions dated May 20th, 1912.

In pursuance of instructions I commenced my survey at the nine mile post on O.L.S. Speight's meridian line run in 1910 from the 108th mile post of O.L.S. A. Niven's base line run west from the 120th mile post of the boundary between the Districts of Nipissing and Sudbury in 1899.

From this point I ran east, astronomically, a distance of nine miles and thence south, astronomically to intersection with O.L.S. Niven's base line near the 99th mile post and also north, astronomically, a distance of 9 miles.

Continuing my first base line east, astronomically, 9 miles and again running south, astronomically, to intersection with O.L.S. Niven's base line near the 90th miles post and also north, astronomically, a distance of 9 miles.

Again continuing my first base line to intersection with O.L.S. Pierce's meridian line, run north, astronomically, from the 81st mile post of O.L.S. Niven's base line near the ninth mile post of said meridian.

From here I went down the Kapuskasing River and produced O.L.S. Speight's base line run in 1909 from the 2nd mile post of the chord begun about 60 chains east of the Kapuskasing River, to intersection with my meridian run north astronomically from near the 90th mile of O.L.S. Niven's base line, and again with O.L.S. Speight's meridian run south astronomically from his base line 27 miles north from O.L.S. Niven's base line.

Continuing my base line west, astronomically, I intersected my meridian run as aforesaid north astronomically from near the 99th mile of O.L.S. Niven's base line.



And again continuing west, astronomically, I intersected O.L.S. Speight's meridian run in 1910, from the 108th mile post of O.L.S. Niven's base line, near the 18th mile post thereof.

The above mentioned lines were well cut out and the adjacent trees blazed on three sides in the usual manner, and hewn posts were planted as shown in the notes, care being taken to plant these posts firmly; where possible a mound of stones was erected about the post, and when the point came in a lake or river the post was planted at the nearest suitable point and the proper chainage in miles, chains and links carved thereon.

Iron posts were planted as shown in the notes but were not planted at all points as instructed on account of a consignment going astray when forwarded by freighters from Chapleau, which I regret very much.

At frequent intervals throughout the survey observations on Polaris were taken for obtaining azimuth and the magnetic declination which varied between 5 degrees and 8 degrees west of the meridian was noted and entered in the field notes.

Throughout the survey the chainbearers were duly impressed with the importance of their duties and of the need of great care to obtain accuracy in their measurements.

#### NATURAL FEATURES.

The district through which my lines run seems for the most part to be rolling land with a predominance of swampy land, especially along the route of the Canadian Northern Railway, which traverses this district diagonally. North of this branch of the Canadian Northern Railway (under construction) and between the Kapuskasing River and the Missinaibi River is a belt of good agricultural land for the most part being a greyish clay loam with a light grey clay subsoil. To the south there are small portions of good land but with a good deal of stone and round boulders beneath the loam. The country around Gull Lake and from thence easterly to the Trout River is stony land interspersed with swamp and marshes. Along the Missinaibi River there is good clay land, but lighter than in the interior townships to the north and east.

Speaking generally, the three townships north of my first base line are suitable for agricultural purposes and of the balance about fifty per cent. is good land.

No evidence of economic minerals were noted.

#### TIMBER.

The northeastern portion of the district is well wooded with spruce, balsam and cedar of a size suitable for building operations, ties and pulpwood but considerable tamarac was seen in the western and southern portions, especially in the stony country.

Along the second base line and southwest to the Missinaibi River and the Canadian Northern Railway considerable good poplar, Balm of Gilead and some pine was noted. While there is abundance of timber for use of settlers and in construction, yet there is not that amount which would warrant extensive lumbering operations.

## WATER POWER.

Several good rapids and chutes were noted which would be adaptable for use in development of power, the more important being on the Kapuskasing River about six miles from Kapuskasing Lake, and again just north from Speight's base line. Some of the rapids of the Missinaibi would furnish problems in water power development.

## GAME.

Moose and caribou appear to abound in the swamp country and we saw signs of red deer in the hilly country to the south.

Muskrat, otter, beaver, marten, fisher and mink were seen occasionally; while rabbit, partridge and duck did not seem so plentiful as of late years. The rivers and lakes generally are well stocked with pike, pickerel and perch. There is splendid speckled trout fishing on Beaver River, fish up to one and one-half pounds being taken.

Accompanying this report are a plan mounted on linen, a timber plan, field notes, chainbearers' oaths and account in triplicate.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) HERBERT J. BEATTY,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 22.*

## SURVEY OF TOWNSHIP OUTLINES DISTRICT OF SUDBURY.

PETERBOROUGH, ONT., *January 30th, 1913.*

Sir,—I have the honour to submit the following report on the survey of Township outlines—along the Canadian Northern Railway, in the District of Sudbury performed by me, under instructions from your Department, dated July 9th, 1912.

As instructed, I commenced the survey at a point ten chains east of the south-west angle of the Township of Garvey—the south boundary line of which, I produced due west astronomically twelve miles and ten chains from the post planted on the east shore of Donneganna Lake—said post being ten chains east of the south-west angle of the Township of Garvey, which falls in Donneganna Lake. From the end of the sixth mile on this base line I ran a meridian due north astronomically eighteen miles, and from the end of the sixth, twelve and eighteen

mile on this meridian I ran base lines due east and west astronomically six miles to intersect a meridian on the east, surveyed by me in 1911, and to connect with a meridian on the west which I afterwards ran due north astronomically eighteen miles from the end of the twelfth mile on my first base line. I also produced the north boundary of the Township of St. Louis west astronomically a distance of forty-two chains and fifty-six links to intersect the west boundary of the Township of Jack, which meridian had just been surveyed by Ontario Land Surveyor, Walter Smith, my base line produced intersecting Mr. Smith's meridian one chain and seventy links north of the point at which he had established the south-west angle of the Township of Jack. All lines in connection with the above survey were well opened out—blazed—chained and posted. At each of the angles of the various townships, iron posts—one and one-half inches in diameter—three feet long and painted red, were planted; on these posts the names facing the respective townships, were cut with a cold chisel. On the meridian lines durable wooden posts six inches square were planted at the end of each mile with the number of miles said posts are distant, north of the south-east or south-west angle of the adjacent townships, cut on the south side with a scribing iron, durable posts four inches square and similarly marked with the half-mile points were also planted. On all lines running east and west durable posts six inches square were planted at the end of each mile with the number of miles said posts are distant west of the south-east or north-east angle of the adjacent townships, cut on the east side with a scribing iron—durable posts four inches square similarly marked with the half-mile posts were also planted. Going west along the south boundaries of the Townships of Westbrook and Vrooman the line passes over an undulating sandy country timbered with Banksian pine, spruce, white birch, poplar, balsam and cedar, with alder and willow underbrush and considerable windfall; spruce swamps of considerable extent are also met with all along this line. No white or red pine suitable for lumbering is seen, but much of the Banksian pine and spruce is of a considerable size, and, besides being valuable as pulpwood, would, I am sure, make a good quality of lumber. Going north along the west boundaries of the Townships of Westbrook, Champagne and Groves the character of the country is much the same as far north as Minniesinaqua Lake, where it becomes rocky and broken. Along the sixth mile of the west boundary of the Township of Westbrook and first mile of the west boundary of the Township of Champagne considerable good red and white pine up to twenty-four inches in diameter is seen. Along the west boundary of the Township of Groves—east of Minniesinaqua Lake a considerable area of spruce swamp is passed over, also a small patch which has just been destroyed by fire—no doubt burnt in connection with fire used for clearing the right-of-way of the Canadian Northern Railway which lies a short distance east at this point.

Going north along the west boundaries of the Townships of Vrooman, Benne-weiss and St. Louis for the first two miles, the line passes over an undulating sandy country covered almost exclusively with scrubby Banksian pine, and from this point to the end of the fifth mile on the west boundary of the Township of Vrooman, the line passes over a gently undulating sandy plain almost destitute of living timber. Along the sixth mile of the west boundary of the Township of Vrooman and the first and second miles of the west boundary of the Township of Benne-weiss, the character of the land is much the same but the timber has been destroyed by fire some years ago and is now replaced by small Banksian pine, poplar and white birch, known as Brulé country.



Along the third, fourth, fifth and sixth miles of the west boundary of the Township of Benneveiss, and along the whole of the west boundary of the Township of St. Louis, the country is rough and rocky, the timber consisting chiefly of Banksian pine, spruce and birch up to fifteen inches in diameter with alder and willow underbrush and heavy windfalls. Along the fourth, fifth and sixth miles of the west boundary of the Township of St. Louis some scattered white pine up to eighteen inches in diameter and of fair quality is seen.

Along the north boundaries of the Townships of Westbrook and Vrooman the land is undulating and sandy, and, with the exception of several spruce swamps which the line passes through, the timber is of the same general character as that already noted.

Along the north boundaries of the Townships of Champagne and Benneveiss the country is rolling and rocky, timbered chiefly with Banksian pine, spruce, birch, poplar and balsam; a few small swamps are also crossed on this line. Along the north boundaries of the Townships of Groves and St. Louis the country is rough and rocky the timber being much the same as that already described. On the Canadian Northern Railway steel was laid to a point about one mile north of the north boundary of the Township of Champagne at the time of survey.

The geological formation of this locality is the Huronian, no mineral of value being seen. I think I am also quite safe in saying that in the six townships outlined by me this season, there is absolutely no land fit for agriculture. I found the average magnetic variation about seven degrees west. Frequent observations for Azimuth were taken, the lines in all cases checking very closely.

Moose are very numerous in this locality, and the beaver is still active.

Accompanying this report are plans, field notes and accounts, all of which I trust will be found complete and satisfactory.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) J. W. FITZGERALD,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 23.*

## SURVEY OF THE TOWNSHIP OF HENVEY, DISTRICT OF PARRY SOUND.

PARRY SOUND, June 6th, 1912.

SIR,—I have the honour to report that under your instructions of May 20th to make a resurvey of the south west part of the Township of Mowat, I left Parry Sound on May 29th and arrived at Byng Inlet Mills the same evening. On the following day I hired my men and moved up the Still River about two miles, where I camped close to the north boundary of the Township of Wallbridge and the following morning observed Polaris for meridian and re-ran the north boundary of Wallbridge from the post between lots 42 and 43 eastward to side road 35-36 finding all the posts or portions of them, also the south-west angle of the Township of Mowat, where I found part of the original post in a mound of stones. On the following day (May 1st) I ran a trial northward from said south-west angle of Mowat one hundred chains without finding indications of the original boundary till within a few chains of Con. line II and III, and found that my line was one chain and ninety-five links east of the original monument marking said con. line. I found the bottom part of the post in the centre of the west boundary and centre of said con. line in pile of stones, the post for Con. II and west side of lot 35 was lying beside a mound of stones.

On May 3rd I ran the true boundary between the south-west angle of Mowat and Con. II and III on west side of said township.

There are no settlers in the Township of Mowat along the Still River. They are all west of this township in the unsurveyed land, nor is there any land along the Still River in the township worth settling on.

The object of the survey being to locate the settlers along Still River in the Township of Mowat, I did not consider it necessary to make further survey.

I herewith enclose the names of the several settlers along the Still River in the unsurveyed land between the north boundary of the Township of Wallbridge and the west boundary of the Township of Mowat, with the estimated acres of each man's clearing.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) DAVID BEATTY,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 23a.*SURVEY OF A PIECE OF LAND WEST OF MOWAT AND SOUTH OF THE HENVEY  
INLET INDIAN RESERVE.

TOWNSHIP OF HENVEY,

PARRY SOUND, July 26th, 1912.

SIR,—I have the honour to report that under your instructions I have located the several settlers on Still River and vicinity in the unsurveyed land west of the township of Mowat and north of the township of Wallbridge. I interviewed every settler who claimed a location on Still River and had improvements made, and adjusted their boundaries agreeably between them with the exception of W. Gavin (on lot 8 as shown on plan) sometimes called Bedor and commonly known as Wild Cat, who claims a part of lot 3 on the south side of Still River in what I have called Con. B, as well as a part of lot 7 extending along what is known as Little Still River, but from all the information I could get, I decided that what I have blocked out as lot 8 is all that he is entitled to and possibly a little more.

I made a careful traverse of Still River and located the posts which I planted between the several lots in both Cons. A and B therefrom as is shewn on my plan and field notes.

I ran concession lines II and III west from the west boundary of Mowat to S. R. 10/11 and said S. R. south to the Wallbridge boundary. I then ran S. R. 5/6 northward to the Indian Reserve through Cons. III, IV, V, VI and VII and ran concession lines III, and IV and V and concession line VI and VII each across the first ten lots west of Mowat. I did not run S. R. 10/11 through concessions III, IV, V and VI because entirely unfit for settlement, the country being rocky ridges timbered with scrub jack pine. The country along the Canadian Pacific Railway up to the Indian Reserve is good land for two or three lots on each side.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) DAVID BEATTY,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines.

*Appendix No. 24.*

## SURVEY OF THE TOWNSHIP OF MULLOY, DISTRICT OF ALGOMA.

TORONTO, December 30th, 1912.

SIR,—We have the honour to submit the following report on the survey of the Township of Mulloy, in the District of Algoma, made under instructions from your Department, dated the 20th day of May, 1912.

The township is crossed by the line of the National Transcontinental Railway which enters it on the east boundary at a point seven chains and ninety-four links north from the south-east corner of the township, at mileage 33, plus fifteen chains and twenty links in District E of that railway, and leaves it on the west boundary at thirty chains and sixty-one links north of the south-west corner of Lot 28, Concession VII, at mileage 43, plus thirty-one chains and ninety-three links of the said railway.

The township is bounded on the south by the unsurveyed township of McCoig; on the west by the unsurveyed township of Shuel; on the east by the unsurveyed Township of Fintry, and on the north by the unsurveyed lands of the Crown.

On the 4th of June, we left Toronto, via the Grand Trunk Railway, and Timiskaming and Northern Ontario Railway for Cochrane, and from there proceeded by construction trains on the National Transcontinental Railway, to the township.

Work was commenced on the 18th of June.

All lines were run with a transit and frequent astronomic observations, records of a number of which are appended, were taken to verify the courses of the lines run. The lines were well opened out and blazed.

Wooden posts of the most durable wood obtainable were planted at the points required by the instructions.

The iron posts furnished by your Department, were planted as given below; at the intersection of the centre lines of allowances for road at the north east corner of the township of Mulloy, a post one and seven-eighths inches in diameter, marked "Mulloy" on the south-west face, "Fintry" on the south-east face, and "R" on the north, south, east and west faces. Iron posts, one and one-quarter inches in diameter, were planted at the following points; at the intersection of the centre of road allowance along the east boundary, with the centre of road allowance between Concessions VI and VII; at the intersection of the centre of road allowance along the west boundary, with the centre of road allowance between Concessions VI and VII; at the intersection of the centre of road allowance along the south boundary with the centre of road allowance between Lots 12 and 13; at the intersection of the centre of road allowance along the north boundary with the centre of road allowance between Lots 12 and 13; at the intersection of the centre of road allowance between Concession VI and VII, and the centre of road allowance between Lots 12 and 13.

A traverse was made of the centre line of the right of way of the National Transcontinental Railway as constructed on the ground, and where it was used as the fronts of lots, wooden posts were planted on the edge of the right of way, and on the inner edge of the road allowances, which were laid out one chain wide along each side of the right of way.

The general level of the Bad River from its entrance of the township in Lot 28, Concession V, on the west boundary, to the lower "Fall," in Lot 15, Concession X, is forty to fifty feet below the surrounding country, and from the last mentioned point to where it crosses the north boundary in Lot 11, Concession XII, it is about thirty to thirty-five feet below the general level.

A traverse was made of the Bad River.

A traverse also was made of a small lake in Lot 14, Concession VII.

#### SOIL.

On most of the township the clay soil is intermingled with a small proportion of gravel and is of good quality, with from twelve to eighteen inches of moss and peat in the low places, and two to four inches on the higher ground.

On Lot 13, Concession XI, the beach along Bad River is gravelly and this extends into Concession XII.

On the west boundary of Lot 28, Concession 1, an outcropping of pegmatite occurs, and on the adjoining land there are a number of boulders.

On the west boundary of Lot 28, Concession XI, an out-cropping of slightly schistose green rock occurs and extends about ten chains east.

On the south boundary of Lot 18, Concession V, an out-cropping of massive grey granite occurs.

On Lot 28, Concession V, an out-cropping of rock occurs in the rapids on Bad River.

At the first fall, in Lot 19, Concession VIII, and at the second "Fall" in Lot 15, Concession X, out-croppings of compact rock occur of Huronian formation.

On the south boundary of Lot 14, Concession IX, an out-cropping of granite occurs.

#### TIMBER.

As will be seen from the accompanying timber plan, most of the township has been burnt over and the second growth in this area is still very small.

On the unburnt area, in Concession VII and VIII, lots 19 to 29, there is a large proportion of spruce and poplar ranging from six to twenty inches in diameter with a few tamarac, cedar, birch, balsam and Banksian pine. A good deal of tie and trestle timber has been cut from this area for use on the National Transcontinental Railway.

The unburnt timber area in Concessions V to XII, lots 1 to 8, on the east side of the township is similar to the above area and has not been cut over.

#### MINERALS.

No indications of economic mineral were seen.

#### GAME.

Tracks of a few moose were seen. Fresh beaver cuttings were noticed in a number of places on the small streams. In the Bad and Trout Rivers speckled trout are fairly plentiful, and below the second falls on the Bad River, pickerel are quite abundant.



## WATER POWER.

Two "falls occur on Bad River, which averages from two chains to three chains in width, and is a very shallow stream full of boulders and almost continuous small rapids. It is impassible with an empty canoe, at low water. The upper fall is situate on Lot 15, Concession VIII, and has a fall of twelve and a half feet, which could be raised to about eighteen feet by a five and a half foot dam, three hundred and fifty feet, more or less, long, across the crest. This would flood the water back to Lot 21, Concession VIII, and flood a strip five or six chains wide. The lower fall is situate on Lot 15, Concession X, and is twelve feet high, and could be raised to seventeen or eighteen feet, by a six foot dam, about one hundred and fifty feet long, across the crest of the fall. This would flood the water back about twenty chains on Lot 15, Concession IX, and flood an area about seven chains in width.

At the natural head the upper fall at low water would give 287 h.p., and the lower fall 276 h.p.

With a head raised to eighteen feet, which could be easily obtained, each fall would give 414 h.p.

At both falls the bottom is solid and the lower fall could be developed as above outlined at considerably less expense than the upper fall.

No possible storage basin of any capacity occurs in the township.

## GENERAL REMARKS.

The gently undulating surface of this township gives facilities for easy drainage by means of the Bad and Trout Rivers, and the depth of the river valleys affords opportunity for draining even the low lying lands.

Any small islands marked on Bad River are simply exposed areas of bald rock or gravel and form part of the river bed.

Those parts of the township which have been burnt over will require the minimum of effort for clearing and preparing for agriculture.

Provision seems to have been made for two railway stations within the Township of Mulloy, and this fact should prove attractive to prospective settlers.

We estimate that about sixty-five per cent. of the township may be classed as good farm land.

Accompanying this report are a general plan, a timber plan, field notes of the entire survey, also account in triplicate.

We have the honour to be,

Sir,

Your obedient servants,

(Sgd.) SPEIGHT & VAN NOSTRAND,

Ontario Land Surveyors.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 25.*SURVEY OF THE SOUTHERLY EIGHT CONCESSIONS OF THE TOWNSHIP OF HANLAN,  
DISTRICT OF ALGOMA.

NORTH BAY, Ont., December 10th, 1912.

SIR,—I have the honour to submit the following report on the survey of the southerly eight concessions of the Township of Hanlan, in the District of Algoma, performed under instructions from your Department, bearing date of June 5th, 1912.

The survey was commenced at an iron post planted by O.L.S. Speight to mark the corner between the Townships of Hanlan, Casgrain, Kendall and Way. This is the south-east angle of the Township of Hanlan, and from this point the south boundary was run west astronomically a distance of nine miles to its intersection with the west boundary of the Township run by O.L.S. Speight, this point being 31 links south of the iron post planted by O.L.S. Speight to mark the south-west angle of the Township of Hanlan.

Posts were planted according to instructions, and the lines were run in the centre of the road allowances in every case except one. In this one case the lot line between Lots 6 and 7 was run on the easterly limit of the road allowance.

Iron posts were planted at the following points:—

1. At the intersection of the northerly limit of the road allowance along the National Transcontinental Railway with the side line between Lots 12 and 13, Concession 1, and marked "R" on the four sides.

2. At the north-west angle of Lot 28, Concession 6, and marked "R" on the north and west faces, Lot 28 on the east face, and Concession 6 on the south face.

3. At the intersection of the side line between Lots 12 and 13 with the line between Concessions 6 and 7, and marked "R" on four sides.

4. At the north east angle of Lot 1, Concession 6, and marked "R" on the east and north faces, Concession 6 of the south face and Lot 1 on the west face.

5. The iron posts planted by O.L.S. Speight at the south-east and south-west angles of the Township were marked "R" on all sides.

On the 20th of August I had the misfortune to have a piece of wood pierce my wrist; and on account of blood poisoning setting in, necessitated my coming out to North Bay. After my return to the survey on the 7th of September my wrist gave me considerable trouble and I had to be in Hearst every few days to get medical attention. On my return to North Bay on the 26th of October, it was necessary for me to go to Toronto and have an operation performed on my wrist and a large piece of wood extracted, which kept me under the doctor's care for over a month. Hence the delay in completion of survey and filing of notes. Rain also retarded the progress of the work, and owing to so many days' rain astronomical observations were few, but were taken whenever possible.

## GENERAL FEATURES.

The National Transcontinental Railway crosses Lots 13 to 28 in the south-westerly portion of the Township.

Evidence of a fire having been over the entire country about 75 years ago were seen every day.

The country in the southerly part of the Township is very level, but it becomes more or less hilly at the northerly part of the survey.

## SOIL.

On the lower ground the clay subsoil is covered with a deposit of black muck, while on the higher ground there is clay and sand.

## TIMBER.

Spruce is the prevailing timber in the flats ranging from 4 inches to 10 inches, while on the higher ground there are some larger ranging up to 20 inches diameter. Poplar and Balm of Gilead attain a large size up to 24 inches diameter. Balsam, White Birch, Tamarac and Cedar also are found up to 15 inches diameter. There are considerable areas covered thickly with small spruce and balsam up to 3 inches in diameter.

## MINERALS.

There are several out-croppings of rock, but without any indications of economic minerals.

## GAME.

Moose are quite plentiful, although no red deer were seen. Rabbits, partridge, muskrats, beaver and mink are also quite plentiful.

Accompanying this report are the field notes, plan of survey and timber plan.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) G. P. ANGUS,  
Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines.  
Toronto, Ont.

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*Appendix No. 26.*

SURVEY OF THE SOUTHERN PORTION OF THE TOWNSHIP OF CASGRAIN, DISTRICT  
OF ALGOMA.

AURORA, Ont., Nov. 24th, 1912.

SIR,—In pursuance with instructions bearing date June 24th, 1912, from the Honorable the Minister of Lands, Forests and Mines, to subdivide the southern portion of the Township of Casgrain in the District of Algoma, we beg to report as follows:—

With as little delay as possible we proceeded to the flourishing Town of Cochrane, the location of which requires no explanation. There we were joined by five Indians from the Golden Lake Reserve along with two chainmen and a cook which comprised our whole party. From there we proceeded by rail over the G.T.P. Railway which is still under construction to the Town of Hearst.



The Township of Casgrain is situated about two miles north of the G.T.P. near the Town of Hearst, on the Mattawishquia River, which stream affords a navigable access, although in low water the numerous rapids that occur make the trip more or less arduous. In compliance with instructions our initial point was the south-east angle of the township. This was definitely defined by the wooden post and iron bar. This point we were also informed was the north-east angle of the Township of Kendall. Furthermore we were instructed to utilize the posts planted on the northern boundary of the Township of Kendall, if we found no great discrepancy. On arriving at the scene of operations we found that the north-east angle of the Township of Kendall was four chains and seventy-eight links east of the south-east angle of the Township of Casgrain, so we were unable to utilize the posts planted by O.L.S. J. S. Dobie.

However, we subdivided the south eight concessions in the usual way, and in accordance with instructions. The existing iron bars at the angles of our township we marked in the usual way, and planted five others as are shown in the field notes.

A number of lakes along with the Mattawishquia River and a small river at the west side of the township were met with. While the lakes covered a fair area of land they were nearly all shallow, averaging only about three or four feet deep in low water. The Mattawishquia River is a navigable stream throughout the township ranging from four to five chains wide. The other streams while about one chain wide are unfit for navigation, except for about one mile where it approaches its destination.

While the presence of game was not entirely wanting, very few moose or deer were seen. Pike and pickerel were found in abundance in the rivers.

Although several large outcrops of rock were to be met with, as regards the presence of economic minerals we found no traces whatever.

The township is clothed with spruce and poplar ranging from six to fifteen inches in diameter with patches of balsam, birch and cedar. While a greater portion of this timber could only be utilized as pulp wood, some no doubt, would approach the merchantable class.

The major portion of the land is especially adapted for agricultural purposes, being a light clay loam, with in most cases, a natural drainage to the river.

Although climatic conditions are not all that could be desired, if last year was any indication, as soon as the agency of civilization approaches, agricultural pursuits should be a thriving industry.

The following iron posts were planted and marked as follows:—

At the south-easterly angle of the township a  $1\frac{3}{4}$  inch iron post marked on the north-west "Casgrain," on the north-east "Shannon," on the north IX M 50 lks. and "R" on the north, south, east and west sides.

At the south-east angle of Lot 13, Concession 1, a  $1\frac{1}{4}$  inch iron post marked "Con. 1" on the north face, "Lot XIII" on the west face and "R" on the south and east faces.

At the south-west angles of the township a  $1\frac{3}{4}$  inch iron post marked "Kendall" on the south-east face, "Casgrain" on the north-east face and "R" on the south, east, west and north faces.

At the north-east angle of Lot 1, Concession VI, a  $1\frac{1}{4}$  inch iron post marked "Con. VI" on the south face, "1" on west face and "R" on east and north faces.

At the north-east angle of Lot 13, Concession VI, a  $1\frac{1}{4}$  inch iron post marked "Lot XIII" on west face, "Con. VI" on the south face and "R" on the north and east faces.



At the north-east angle of Lot 28, Concession VI, a  $1\frac{1}{4}$  inch iron post marked "R" on the north and west faces, "Con. VI" on the south face and "XXVIII" on the east face.

At the north-east angle of Lot 13, Concession VIII, a  $1\frac{1}{4}$  inch iron post marked "XIII" on the west face, "Con. VIII" on the south face and "R" on the north and east faces.

Accompanying this report, plans, field notes and accounts, all of which are respectfully submitted.

We have the honor to be,

Sir,

Your obedient servants,

(Sgd.) COLTHAM & COLTHAM,

Ontario Land Surveyors.

The Honorable, the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 27.*

SURVEY OF THE TOWNSHIP OF STODDART, DISTRICT OF ALGOMA.

NEW LISKEARD, Oct. 15th, 1912.

SIR,—In accordance with instructions dated May 21st, 1912, to survey the Township of Stoddart, in the District of Algoma, along the line of the National Transcontinental Railway, I herewith present my report.

Practically the whole of the township is good agricultural land, there are scarcely any rock exposures, and while there are what might be termed spruce swamps, these will no doubt dry out as fast as cleared of the timber, as the natural drainage of the township is excellent. There was but one muskeg met with, that being on the line between lots Nos. 24 and 25 on either side of the T.C. Ry.

The timber as a rule is light and of no material value, a good deal of it is too small for pulpwood, being of quite recent growth, but there are a few patches of spruce that run up to sixteen inches in diameter, although a considerable quantity of this has been used for bridge timber on the railway construction. Along the shores of the lakes and rivers, considerable cedar of fair size was met with.

There is quite a large area of water in this township. Lakes St. Joseph and Pewabiska are the largest bodies. The islands are few, in the former lake there are but two small islands, in the latter only four, within the limits of the township. In Fort Lake is found the largest island, there being fifty-five acres in it.

Lake Pewabiska can be easily reached from the N.T.C. Railway by boats or launches of small draught, with a little work of blasting and cleaning the channel at one point.

The streams are all very sluggish, with scarcely any perceptible current, but the water is quite pure and clear though it appears black. One exception is the Kabinagagami River, which is very swift.

Pewabiska Lake, which extends for miles beyond Stoddard Township and is dotted with islands will no doubt some day make a beautiful summer resort.

The rivers abound in fish of considerable size, particularly pike and pickerel. There may be trout, but none were seen. The season of the year may have had something to do with this. Traces of moose were often noticed. Not one of the party, however, saw a moose, although we sometimes heard them. Of the fur bearing animals muskrat were very plentiful, mink were seen and fresh traces of beaver work noted. Wolves were heard on one occasion, but not a sign of red deer was seen.

The lines of the township were all run with a transit theodolite and measured with steel band chains. The lakes and rivers were traversed partly by triangulation and partly with stadia and with micrometer, the bearings being all obtained with the transit.

Iron posts were planted in the centre of the concession road allowance between lots 12 and 13 on the south boundary of the township, between lots 12 and 13 on the line between the 6th and 7th concessions and on the north boundary of the township at the east limit of lot numbered 13. Similar posts were planted between concessions VI and VII where the same intersects the east and west boundaries of the township. These iron posts were marked as shewn in the field notes prepared of the survey of this township.

Of the land in the township, I estimate that 80 per cent. of it is arable without any artificial drainage to speak of, and 10 per cent. more can be made so with drainage, and possibly more than this.

The total acreage of the lots is .....	45,792.34	acres
The total acreage of the roads is .....	1,758.61	acres
The total acreage of water is .....	4,236.7	acres
The total acreage of islands is .....	69.25	acres
The total acreage of Ry. lands is .....	161	

Total .....	52,017.9	acres
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All of which is respectfully submitted.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) C. H. FULLERTON.

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Province of Ontario.

*Appendix No. 28.*

## SURVEY OF THE TOWNSHIP OF STUDHOLME, DISTRICT OF ALGOMA.

ALVINSTON, Feb. 26th, 1912.

SIR,—I have the honor to submit the following report of survey of the Township of Studholme in the District of Algoma on the T.C.Ry. and Kabinagagami River made under instructions bearing date the 17th day of June, 1912.

I left Alvinston August 1st, and proceeded to Cochrane, and after arranging for supplies, canoes, men, etc., I proceeded by contractor's train to Kabinagagami River.

After observation on Polaris at E. Elongation at the East Boundary at Con. VI/VII I proceeded to subdivide the township as instructed and to run the south boundary.

This township is surveyed under the nine-mile system with the exception that the T.C.Ry. will form the boundary between Cons. VII and VIII across lots four to eight inclusive, and between Cons. IX and X across lots thirteen to eighteen inclusive, and I have laid off the lots as shown by the plan and field notes as instructed.

Commencing at the east boundary at Con. line VI and VII I ran west to the road allowance between lots six and seven, and after running south the proper distance I ran the south boundary east and west from this line, intersecting the east boundary at a point 28 links south of the post planted by Mr. T. B. Speight, O.L.S., and intersecting the west boundary at a point 40 links south of the post planted by Mr. Speight.

I then proceeded to lay off the lots in the usual way, checking the lines by observation as shewn in the field notes. Owing to the wet and cloudy weather it was rather difficult to obtain many observations, but sufficient were taken for the progress of the survey.

The survey was made with transit and the lines have been well opened out and blazed. Posts have been made of the most durable timber obtainable. In only a few cases have posts other than spruce, cedar and tamarac been planted. The posts are marked with a scribe and driven in as far as possible.

The following iron posts were planted:—

On South Boundary at the centre of road allowance between lots 12 and 13; 11¼ inch iron marked on south "R"; On north "Con 1-R"; On east "Lot XII-R"; On west "Lot XIII-R."

On Con. Line VI/VII and road allowance between lots 12 and 13, 11¼ inch iron post marked, On north, "Con. VII-R"; On south, "Con. VI-R"; On east, "Lot XII-R"; on west "Lot XIII-R."

On north boundary and road allowance lots 12 and 13, 11¼ iron post marked, On south "Con. XII-R"; On north "R"; On east "Lot XII-R"; On west "R."

On east boundary at road allowance between Cons. VI and VII, 11¼ inch iron post marked, On north "Con VII-R"; On south, "Con. VI-R"; On west, "Lot 1-R"; On east "R."

On west boundary on road allowance between Cons. VI and VII, 11¼ inch iron post marked, On north "Con. VII-R"; On south, "Con VI-R"; On east, "Lot XXVIII-R"; On west "R."



There are as well 1¾ inch iron posts planted at the north-east and north-west angles of the township planted by Mr. Speight on the survey of boundary lines.

#### GENERAL FEATURES.

The Township of Studholme is undulating or generally level and fairly dry with the exception of the south-east quarter which is of a swampy nature, this **can**, however, be easily drained as the fall is generally good and is probably the best section of the township.

Reference might be made to the Timber Map in forming a general idea of the nature of the township; Area No. 1 is a level swampy tract with clay subsoil and muck or loam top of about four inches depth; Area No. 2 is undulating and is of a sandy clay or sandy nature with gravel in places.

Along the line lots 18/19 through concessions 7 to 10 inclusive the country is somewhat broken with deep gullies; Area No. 3 is a level belt with a sandy clay subsoil and a loam or muck top similar to Area No. 1, but this area (No. 3) has not so much swamp as Area No. 1.

Approximately seventy per cent. of the land might be termed arable, and there is very little muskeg, and from the growth of potatoes, lettuce, radishes, turnips and carrots planted along the railway line at Kabinagagami River there can be no question of the adaptability of this country for agricultural purposes, although this township does not appear to be, taken generally, as good as the land to the west and to the east. Excellent hay is seen along the line of the railway in places.

The fine quality of gravel in this township at Pit 1 and Pit 3 T.C.Ry. will be valuable for constructing roads.

Numerous lakes occur within the township, and the Kabinagagami River flows along the eastern portion. Above the 8/9 Con. road, the river is good for travel, but below this a series of rapids occurs which renders it quite unfit for canoe travel.

#### SOIL.

In general the soil is of a sandy clay nature, and should be easily workable, and possibly this soil is preferable to a stiff clay soil. Nearly all the township has a top layer from two to four inches of loam or muck.

#### TIMBER.

The timber consists of a good growth of Spruce, White Birch, Poplar, dead Tamarac, and Balsam, with a few Balm of Gilead and Cedar. The underbrush is rather thick and of alder, moose maple and hazel. The size of timber runs from four to eighteen inches, and in places twenty-four inches. Much of the Tamarac and Spruce along the railway has been made into ties and care will have to be exercised in this section in order to prevent fires spreading in the tops and brush left.

The general timber is large enough for building purposes and some good pulpwood can be cut. There are some belts of White Birch toward the centre of the township along the railway which might be used for the manufacture of charcoal and wood alcohol.



## MINERALS.

No mineral indications were found in this township. The few exposures of rock are of Huronian origin.

## WATERS.

The Kabinagagami River is a stream about  $3\frac{1}{4}$  chains wide with rather dark water, but quite wholesome. There is a fair current. The river is broken with rapids in Con. VI, where a power of 1,400 horse-power may be developed at an average flow.

At the railway in Con. VII, a power of 2,300 horse-power may be developed.

In Cons. IX and X a long flat rapids occurs, but owing to the wide flats it might be difficult to develop power.

In Con. XI at a chute, about 1,400 horse-power may be developed. The Traverse Notes show the reservations I would recommend.

Constance Lake consists of a shallow body of water with a sandy bottom, and along the south, west and north portions of the shore the lake is very shallow for a considerable distance out.

The water of the numerous lakes is quite clear.

## FISH AND GAME.

Game in the vicinity of the railway is scarce. A few signs of moose were seen, but very few of bear and none of deer or caribou.

There are numerous beaver and muskrat and a few mink.

The fish consists of pike, pickerel and some brook trout, and are quite plentiful.

There are plenty of ducks, but partridges were this year rather scarce owing no doubt to the wet season.

## VARIATION OF THE MAGNETIC NEEDLE.

The magnetic variation runs from 4 degrees to  $8\frac{1}{4}$  degrees west, but generally the variation is about 6 degrees west and fairly constant.

I submit with this report.

1. Field Notes of the Survey.
2. Traverse Notes of the Waters.
3. A General Plan.
4. A Timber Plan.

All of which is respectfully submitted.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) A. S. CODE,

O.L.S., C.E.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 29.*

## SURVEY OF THE TOWNSHIP OF SHACKLETON, DISTRICT OF TIMISKAMING.

GUELPH, March 22nd, 1913.

SIR,—I have the honor to submit the following report and field notes of the survey of Shackleton Township in the Timiskaming District, surveyed under instructions from your Department, dated May 22nd, 1912.

This township is on the line of the National Transcontinental Railway, about fifty miles west of Cochrane. The railway enters the township from the east between the ninth and tenth concessions and forms the line between these concessions to the side road between lots twelve and thirteen and from lots thirteen to eighteen it forms the line between concessions ten and eleven, and from lots nineteen to twenty-four the line between concessions eleven and twelve, it passes through the townsite of Alexandra and crosses the north boundary at lot number twenty-seven.

The township is laid out into lots of 150 acres each, except in those concessions fronting on the railway. The survey lines were run in the centres of the road allowances and the lot posts offset fifty links on each side of the survey line, a witness post being planted on the line opposite each lot corner. The lot posts were marked with the lot numbers on the east and west sides, and the concession number on the north or south side, and R on the side next the road allowance in the usual manner. Iron posts were planted beside the wooden posts of the points indicated on the plan.

The township is traversed from south to north by the Ground Hog River which enters it at lot 27, Con. 1 and flows north and northwesterly till in Con. 7, the main channel cuts the west boundary and forms the boundary of the township, for a short distance. In the eighth concession it takes a north-easterly course and leaves the township in the Alexandra Townsite. The river varies in width from four to eight chains and is from three to eight feet in depth and flows with a fair current. There are no rapids nor waterfalls within the township. A careful stadia survey was made of the river and plotted on a scale of ten chains to an inch.

The central part of the township is drained by Wellington Creek which enters at lot 10, Con. 1, and flows northward till it crosses the N.T.C. Ry. at lot 13, and turning westward in the eleventh concession it crosses the north boundary at lot 22.

With the natural drainage afforded by those streams the swamps in this township are comparatively small in extent, the largest swamp being along the railway in the northeast corner of the township.

Four lakes were found within the township besides the one which crosses the north boundary. Two of these are each about a mile and a quarter in length by a quarter of a mile in width, the others are comparatively small.

There are numerous rock exposures along the river and some small ridges of rock in different parts of the interior but as a whole the surface of the township is not broken and probably sixty per cent. of the land in it can be brought under cultivation without much expenditure for drainage. The soil is clay and where the land has been cleared around the old construction camps the excellent

growth of timothy and clover which has sprung up and the garden vegetables grown by the residents in Alexandra would indicate in a measure the adaptability of the country for farming.

The township contains a large amount of poplar and spruce timber with some balsam, cedar and white birch. The poplar is of good quality and runs from twelve to twenty-four inches in diameter of the stump.

There is also a considerable amount of large spruce and a great deal of a size suitable for pulpwood. Most of the large timber close to the railway and along the Ground Hog River in Cons. 9, 10, 11 and 12 has been cut for construction purposes or for railway ties.

I have the honor to be,

Sir,

Your obedient servant,

(Sgd.) JAMES HUTCHEON,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forest and Mines,  
Toronto, Ont.

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*Appendix No. 30.*

SURVEY OF THE TOWNSHIP OF SARGEANT, DISTRICT OF TIMISKAMING.

OTTAWA, December 26th, 1912.

SIR,—I have the honor to submit the following report of our field operations during last season, on the survey of the Township of Sargeant, sixty miles east of Cochrane on the National Transcontinental Railway and north of Lake Abitibi.

On receipt of your instructions dated May 21st, 1912, we, "Mr. Andrew Bell and N. J. Slater," proceeded from Ottawa June 12th to North Bay, where we purchased our supplies. On June 14th we left for Cochrane and were obliged to remain there till June 21st, as our outfit did not come in; it having been forwarded by freight.

We left Cochrane June 21st, with seven men, for Aylen River, where we camped on the south side of tracks in old construction camp.

Saturday, June 22nd, commencing chaining and posting along railway from west boundary of township.

June 24th, we took observations on long tangent of Transcontinental Railway given as south 72 degrees 56 minutes east, and found it to be south 73 degrees 3 minutes 30 seconds east. The railway bearings had evidently been commenced from the boundary line between Ontario and Quebec and no corrections had been made for curvature. On June 25th, commenced to run side road between Lots 22 and 23, and on June 26th finished side road to north boundary.

Work went steadily on in the southern part of the township with two parties. On August 28th Mr. Bell decided to go to Cochrane, being ill, and never returned. Owing to construction going on the railway we found great difficulty in keeping men.

This township is well timbered with timber suitable for settlers' building purposes. The soil appears to be well adapted for farm purposes being mostly clay subsoil, covered with black muck, and, on the low lying land, moss. Muskeg holds the frost till late in the summer, probably July. We found it difficult to drive posts through the ice protected by a covering of moss, probably this ice accounts for cold nights during the summer season. The general opinion is that when the moss is removed the climate will alter.

The land in this township appears to be much better than that lying between it and Cochrane, also the land to the north and south of the township appears to be of similar nature to that of the township.

The following iron posts were planted at the south-east angle of the township marked on the north "CON. 1" "SARGEANT" on the east "ROAD," on the west "LOT 1": at the north east angle of Lot 1, Concession 7, marking "R" on the north and east sides, "CON. VII." "SARGEANT" on the south and "LOT 1" on the west; at the south-east angle of the township marked on the north "CON. 1" "SARGEANT" on the west "LOT XVII." and on the east "ROAD"; at the north-east angle of Lot 17, Concession 5, marked on the north "ROAD," on the east "ROAD," on the south "CON. V.," on the west "LOT XVII." "SARGEANT"; at the south-east angle of Lot 17, Concession 6, marked on the north "CON. VI.," on the west "LOT XVII." "SARGEANT," on the south and east "ROAD"; at the north-east angle of Lot 17, Concession 7, marked on the north "ROAD," on the east "ROAD," on the south "CON. VII." "SARGEANT," on the west "LOT XVII."; at the north-west angle of the township, marked on the north "ROAD," on the east "LOT XXXIV," on the south "CON. VII." "SARGEANT," on the west "ROAD," and at the south-west angle of the township marked on the north "CON. 1" "SARGENT," on the east "LOT XXXIV.," and on the west "ROAD."

On September 18th I disbanded the party and left for Cochrane, having completed the survey according to instructions and finished by traversing the Okimodasik River and tying to the Interprovincial Boundary Line.

I have the honor to be, Sir,

Your obedient servant,

(Signed) N. J. SLATER,

*Ontario Land Surveyor.*

The Honourable the Minister of Lands, Forests, and Mines,  
Toronto, Ont.

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*Appendix No. 31.*

## SURVEY OF TOWNSHIP OF FAUQUIER, DISTRICT OF TIMISKAMING.

PARRY SOUND, November 30th, 1913.

SIR,—I have the honour to report that under your instructions I surveyed the first eight concessions of the township of Fauquier, into farm lots.

I left Cochrane with my party on the 2nd of August and went into camp at Conmee Station, in the township, the same day, and commenced the survey of the township the next day by brushing out and chaining the south boundary from the south-east angle, where I found an iron and a wooden post both regularly marked and continued the survey, finishing my work the second of October.

The greater part of this township will make good farming land. Although a considerable portion of it is swampy, it appears to have good drainage. There is very little of what may be called muskeg in the township, and I only saw exposed rock on the west and south shores of Remi Lake. The soil throughout the township is clay loam.

The timber on the high ground is poplar, spruce, birch and balsam and in the swamps is principally spruce.

There are several burnt areas in the township, the most of them tracable from the Transcontinental Railway, which passes through the township entering on the east side in Concession 1 and passing out on the west side in Concession VI. There are several places immediately along the Transcontinental Railway where an acre or two has been cleared up, or, rather, the old logs have been cut and piled up but not burnt (all in burnt section), but the parties who did the work were not on the ground when I was making the survey. The only one who had a house was a man named "Primeau," living with his family on Lot 12, Concession III. I saw no ground under cultivation. Primeau was a section foreman on the Transcontinental Railway.

I planted an iron bar post on the centre line of the south boundary, where it is intersected by the centre line of side road 12 and 13, marked on the north, east, west, and south with "R"; also planted an iron bar post on the centre line of said side road where it intersects the south shore of Remi Lake marked with "R" on the south, east, and west sides. I also planted an iron bar at the north-west angle of Lot 29, Concession VI., and at the north-east angle of Lot 1, Concession VI., both regularly marked for the respective lots.

I did not see any indications of mineral in the township. The rock formation is granite.

Remi Lake in the north part of the township is a clear water lake with plenty of fish, pike, pickerel, and whitefish. Other and smaller lakes in the township are said to have plenty of pike.

I observed Polaris for meridian at eastern elongation on Lot 12, Concession III.; on Lot 21, Concession V., and on Lot 13, Concession VI. The magnetic variation is 6 degrees 45 minutes west.

I have the honour to be, Sir,

Your obedient servant,

(Signed) DAVID BEATTY.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 32.*

## SURVEY OF HAY BAY IN THE TOWNSHIP OF FREDERICKSBURG IN THE COUNTY OF LENNOX AND ADDINGTON.

PETERBOROUGH, ONT., July 8th, 1912.

SIR,—I have the honor to report that, agreeable with your letter of May 20th last, I spent the 22nd and 23rd at your Department in getting all the information and data I possibly could which I thought might be of use to me in connection with my proposed survey and investigation as to the ownership of some large marshes in Hay Bay, in the Township of Fredericksburg, in the County of Lennox and Addington.

Having received tracings and instructions from your Department, dated May 29th, I proceeded to Napanee on June the 7th, where I met and consulted with Mr. Carscallen. I was, however, unable to see Mr. U. M. Wilson until the following day.

On June 17th I left Peterborough—taking my assistant with me. I also took a chainman along, as I learned that the farmers were very busy and that it was doubtful if I could employ a suitable man on or near the work. On the evening of the same day we reached the home of John Sherman, on Lot 6, Concession III., Township of Fredericksburg.

Having procured a satisfactory observation for azimuth on the morning of June 18th, I immediately proceeded to carry out your instructions by measuring up several of the lines between the respective lots, in order to ascertain if these lots contained two hundred acres, or thereabouts, as intended by the original survey and specified in the original Patents from the Crown.

I am pleased to report that all the lots measured by me show that the original patentees received approximately two hundred acres exclusive of the area of any marsh lying in front of said lots. With regard to locating the exact position of the rear line of these lots as intended in the original survey, I found some difficulty—this being a very old settled township I found that lots and parts of lots of various areas, shapes, and descriptions, have changed hands many times, so that—generally speaking—the lay-out of the township as now held by the various owners bears very little resemblance to that intended by the original survey. Between the rear end of the concession fronting on Hay Bay and the rear end of the concession fronting on the Napanee River there are several gores or irregular shaped blocks of land. There is, however, as far as I could ascertain, no dispute whatever with regard to the location of the side lines, rear lines, or property lines between any of the various lots or parcels of land in this section of the township. All the property lines in this locality are well defined by old rail fences (in some places replaced in recent years by wire). These fences are well banked on both sides by stones which have been picked from the adjoining fields by successive generations.

From the best evidence I could get the shore line of Hay Bay has changed position very little during the past 128 years or since the original survey of the township was made; as evidence of this fact, I may say that a stone monument planted early in the last century to mark the intersection of the shore line of Hay Bay with the line between Lots 14 and C.C. now stands exactly, at what I would consider, the shore line of the present day. I might say, however, that I found the

water in Hay Bay exceptionally high this season, many of the older residents in this locality stating that it was as high as they had ever remembered seeing it during the past fifty years.

Generally speaking the line of demarkation between the marsh and the land is well defined. The area of the marsh in front of these lots is, however, governed to a large extent by the rise and fall of the waters of Hay Bay, there being a considerable larger area of marsh in sight on my leaving there June 29th than there was to be seen on my arrival there June 17th.

The parties who claim they own the marsh adjoining their respective parcels of land are—

(1.A) John J. Clark, owner of the west half Lot 9, Concession III.

(2.A) Cornell's Island.

(2) James Cuthill, owner of Lot D.D. Concession III.

(3.A) Samuel Asseltine, owner of the rear or northerly half of Lot C.C. between the 2nd and 3rd concessions.

(3.B) Samuel Asseltine owner of the front or south-easterly half of Lot C.C. between the 2nd and 3rd concessions.

Acting on the advice of the parties I was instructed to consult in connection with this matter—my survey and investigations were confined chiefly to the above five parcels of which I made a careful survey and also of the marshes adjoining them—the respective areas will be found on the accompanying plan—the area of the marsh being variable, the figures I give would, of course, only hold good when computed at the same height of water as when my measurements were made.

(1.A) West half of Lot 9, Concession III., patented to Alex. Hanna, now owned by John J. Clark, and described as follows:—"Commencing at the centre of the said lot on the north side of Hay Bay, then north 31 degrees west 105 chains 27 links, then south 59 degrees west 9 chains 50 links, then south 31 degrees east 105 chains 27 links more or less to Hay Bay, then north-easterly along the water's edge to the place of beginning, containing 100 acres."

As will be seen by the accompanying plan the above description encloses a small area of marsh 3.13 acres of which, in my opinion, the owner John J. Clark is entitled to. I do not think, however, that he has any claim or title to the marsh 4.46 ac. lying in front of said lot.

(2.A) Cornell's Island. Sold by the Indian Department May 30th, 1877, to Martin Shewman—now owned by John J. Clark and described as follows:—"All that parcel or tract of land situate, lying, and being in the County of Lennox in the Province of Ontario, in our Dominion of Canada, containing by admeasurement thirty-eight acres be the the same more or less, composed of the Island in the Bay of Quinte, known as Dockstatter's or Cornell's Island, situate, lying and being in Hay Bay, opposite lots numbers ten and eleven in the township of Fredericksburg." I find this island contains 42.87 acres, the line between the land and marsh all round the island is fairly well defined. In my opinion John J. Clark has no title whatever to the marsh adjoining or surrounding this island.

(2) Lot D.D., Concession III., patented to James McNabb, now owned by James Cuthill, and described as follows:—"Commencing in front on the north side of Big Creek in the limit between Lots Nos. 13 and D.D. at the south-



east angle of the said lot tract, then north 31 degrees 30 minutes west 50 chains more or less to Little Creek, then southerly along the water's edge with the stream to Big Creek, then north-easterly up Big Creek to the place of beginning, containing 60 acres more or less." I find this Lot D.D. to contain 78.09 acre of land and 99 acres of marsh adjoining.

As will be seen by the accompanying plan both Big Creek and Little Creek—whose shore lines or "waters edge" are fairly well defined, are out in the marsh a considerable distance from the land, and I am of the opinion—from the wording of the above description—that James Cuthill is entitled to all the land and marsh enclosed by said description.

(3.A) The rear or northerly half of Lot C.C., Concession III. Patented to David Bowen, now owned by Samuel Asseltine and described as follows:—"Commencing in the centre of the said concession in the limit between the said Lot C.C. and Lot No. 14, then north 31 degrees 30 minutes west 52 chains 63½ links more or less to the allowance for road in rear of the said concession, then south 50 degrees west to Hay Bay, then southerly along the edge of the said bay following its several turnings and windings in the said Lot C.C. to the centre of the said concession, then north 59 degrees east to the place of beginning, containing 150 acres more or less." I find this part of Lot C.C. to contain 91.50 acres of land with approximately 663 acres of marsh adjoining. I do not consider that Mr. Asseltine has any title to this marsh area.

(3.B) The front or south-easterly half of Lot C.C., Concession III. Patented to Philip Smith, now owned by Samuel Asseltine and described as follows:—"Commencing in front of the said concession in the limit between the said Lot C.C. and Lot No. 14, then north 31 degrees 30 minutes west 52 chains, 63½ links more or less to the centre of the said concession, then south 59 degrees west to Hay Bay, then southerly along the edge of said bay, following it several turnings and windings in the said Lot C.C. to the allowance for road in front of the said concession, then north 59 degrees east to the place of beginning, containing 150 acres, more or less." I find this part of Lot C. C. to contain 76.27 acres of land, with approximately 129 acres of marsh adjoining. I do not consider that Mr. Asseltine has any title to the marsh area.

With regard to that part of your instructions to me in which you say: "You might call upon any of the people who claim to own the marsh lands under the grants from the Crown and explain matters to them, because they may not clearly understand that if they claim from the edge of the marsh instead of from the edge of Hay Bay they can only go back 105 chains 27 links according to their patents, and in the event of their owning marsh the probability is there will be a large amount of good land in the rear of their lots not belonging to them."

I was not long on the ground before I fully realized that it would be utterly useless on my part to offer this explanation—all the land owners interested in this matter are acting under legal advice—this marsh area yields a revenue of about \$2,000 a year in rat pelts, and all the parties I interviewed seem prepared to fight the matter to a court of last resort.

In conclusion, I beg to state that it seems very clear to my mind that according to the original surveys, plans and patents, the lots fronting on Hay Bay were intended to commence at the inner edge of the marsh—if the original surveyor intended that any of these Lots should include the marsh area in front, the lines between the respective lots as shown on the original plans would have been shown projected out to the outer edge of the marsh where deep water begins.



I will, perhaps, be pardoned for giving my opinion on what might be called the legal aspect of the question of title involved. I did not, however, consider that my report or plan would be complete and of use to your Department, without doing so.

All of which is respectfully submitted.

I have the honor to be, Sir,

Your obedient servant,

(Signed) J. W. FITZGERALD,

*Ontario Land Surveyor.*

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix 33.*

RE-SURVEY OF CACHE LAKE, TOWNSHIP OF CANISBAY, ALGONQUIN NATIONAL  
PARK.

TORONTO, 29th May, 1913.

SIR,—We have the honour to submit the following report on the re-survey of Cache Lake, in the township of Canisbay, Algonquin National Park, under instructions from your Department bearing date 22nd January, 1913.

Immediately upon receipt of the instructions, arrangements were begun by correspondence with the parties referred to therein, and our party left here in charge of Mr. Ralph Mackenzie Anderson, O.L.S., a member of our firm, on 8th February. The work, involving a traverse of the whole shore of the lake and of the islands therein, was begun at once and prosecuted steadily, in accordance with instructions, until completed on 26th February.

In nearly all cases the lot angles sought were found to be defined by original posts or bearing trees. Wherever necessary, new posts were planted at the lot corners and shown as renewed in the accompanying field notes, but where the original cedar posts remained in good condition, they were left undisturbed. The intersections of all lot lines with the road allowance around the shore of the lake were marked with iron posts, and bearing trees were blazed and noted. All lines surveyed were well opened out and blazed.

The limits of lands already leased, wherever they intersected the shore line, were defined by posts and the lines opened out. The descriptions in some of these leases are somewhat at variance with the facts, owing chiefly to the insufficiency of data on record in the Department.

The part of Crown lease Number 1,816 lying south of the Grand Trunk Railway right of way is not shown on the blueprint furnished us with sufficient data to admit of its boundaries being actually defined on the ground, and in the absence of a written description from the lease, we were unable to define its limits.

In the case of Crown lease Number 1,841, the actual courses of the boundaries and tie lines differ from those set forth in the lease.

The actual area of the lands covered by the description in Crown lease Number 1,842 differs from that stated in the lease.

Crown lease Number 1,843, covering Treasure Island, does not appear to include more than the main island. There is, however, a smaller island to the north-east of the main island, hitherto not shown on recorded plans, and which, while too small for a separate holding, might prove a detriment to the lessee of the larger island, in the event of temporary occupation by undesirable persons.

In the case of Crown lease Number 1,856, the lands actually occupied and improved and intended to be covered by the lease lie considerably to the west of the land covered by the description in the lease.

Already in a number of cases houses have been erected on the shore and islands at points not covered by the leases included by the instructions furnished us. The location of these improvements has been carefully set down in the field notes and shown upon the plan.

Iron posts were planted at selected points throughout the traverse survey and their positions referenced by bearing trees duly blazed, marked, and entered in the field notes. Owing to the supply of iron posts being insufficient for the number of points to be perpetuated, trees were blazed on four sides and marked with the proper numbers, care being taken that the blazing did not unnecessarily injure the trees. The posts and trees referred to were numbered consecutively, C1, C2, C3, etc., around the shore were located, the consecutive numbering being then carried to the islands.

As directed by the instructions the part of the lake shore lying north of the railroad was examined as to its suitability for summer resorts and it was decided to be unnecessary to run lines or plant any posts for that purpose, as owing to its isolated position it is not probable that leases will be applied for in this part of the lake.

With regard to the physical features of the shore and islands in this lake, the land may be generally described as rising to an elevation of ten to fifteen feet above the present level of the water.

The following exceptions were noted: A ridge running from reference post C32 to C33 rises to about forty feet above the water. East of reference post C4 and extending for about five chains on either side of the east limit of Lot Number 8, Concession 5, a bluff rises to the height of one hundred feet. On the south shore of the Madawaska River where it enters the lake, a ridge rising to a height of about fifty feet leaves the shore at the mouth of the river and runs south-westerly inland. At the ends of the bays the shores are low-lying and somewhat swampy.

Particulars in detail of the various parts of the shore are given in the field notes. The country at a short distance back from the shores of the lake rises in some cases to a height of from one hundred and fifty to two hundred and fifty feet, affording good views of the surrounding scenery.

As nearly as we could ascertain, the present surface of the water is somewhat higher than would be the case in a state of nature, owing to the fact that the dam at the outlet, constructed during timber operations, has not been entirely removed, and if free vent were given it is to be expected that the lake level would be lowered. The level, therefore, depends upon whether the remainder of the dam is to be maintained or allowed to disappear in the course of time.

The shore line is in general rocky and somewhat similar in appearance to the Muskoka region.

The shores and territory inland are well timbered with hemlock, birch, cedar and spruce, with scattered red pine and occasional ridges of hard maple. This region having been within the area of lumber operations, all the more marketable pine and hemlock timbers have been taken off. Up to the present, fire has apparently done no damage in the immediate vicinity of Cache Lake. The timber on the larger islands is similar to that on the main land.

Accompanying this report are (a) a plan on scale 10 chains to one inch, (b) a plan on scale 4 chains to one inch, showing all traverse lines with courses and distances and other details, (c) field notes of entire survey.

We have the honour to be, Sir.

Your obedient servants,

(Sgd.) SPEIGHT AND VAN NOSTRAND,

*Ontario Land Surveyors.*

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 34.*

SURVEY OF THE DAWSON ROAD LOTS DISTRICT OF THUNDER BAY.

LISTOWEL, December 2nd, 1912.

Sir,—In pursuance with your instructions, dated June 17th, 1912, I beg leave to report the following: On July 8th I left Listowel and proceeded to Port Arthur by steamer and rail via Port McNicoll, and arrived there on July 11th. I procured my outfit and most of my party at Port Arthur and started the work on July 13th. I had some difficulty in getting a cook to start the job; when you try to hire a cook and he finds he has to cook with an open fire, he generally gets drunk, and when the time comes and the train pulls out he is missing. I started the work by taking an observation on the bank of the Kaministiquia River and from this point I traversed the Dawson Road east and west. From Kaministiquia west I traversed the location according to the field notes, and when I got to the side road between Lots 30 and 31 I found that I was four chains and forty-four links north of the road. From this point west I traversed the road as it was built. A good many buildings were going up along the road and settlers were all using the old road as the boundary between concessions A and B. The old Dawson Road is in good condition from Lot 1 to Lot 80 at the Ascondage River, and if the underbrush and small trees were removed and the bridges and culverts rebuilt this road could be used for all kinds of traffic, pack trains, waggons or autos; one day last July an auto went from Port Arthur to Kaministiquia on the Dawson Road, a distance of 20 miles. Finlanders are the principal settlers in this section and they seem to be hard-working and industrious, most of their log buildings are very neat-



ly built and when finished and properly calked will make warm houses. Most of these settlers have cows and chickens and they have most of them put up stacks of hay for the winter; quite an amount of grass grows along the rivers and creeks and in open places along the railway tracks.

I beg leave to report also that many of these settlers have gardens growing almost any of the more common kind of vegetables, such as potatoes, cabbage, turnips, lettuce, onions, radishes, but on account of the last season being very wet, some of the vegetables were beginning to rot, and did not do as well as if it had been a dry season. The land in this section is nearly all red clay, and clay loam. The country is hilly and there are no large muskegs or marshy land. In places the country is somewhat rocky, the most being west of Lot 55 and south of the Dawson Road. There are also a number of small gravel beds extending through the whole section. It is of good quality as can be seen along the Dawson Road.

I took considerable notice of the rocky country and found indications of iron in many places but found no indications of other more valuable minerals.

The timber throughout this area is nearly all second growth, especially the portions west of the Kaministiquia River where the C.P.R. crosses. Most of the timber is small and very little of it will be suitable for lumber. The different kinds found in order of their abundance, are jack pine to 12 inches, spruce to 12 inches, poplar, balsam, tamarac, white birch, a few white ash. Fire has destroyed a great portion of the timber. Large quantities of jack pine is still standing along the Dawson Road west of Lot 50 and could easily be made into cordwood and shipped out from Finmark on the C.P.R., or from the C.N.R. The country is well watered with small streams but the water is not as good as that found east of Port Arthur.

While engaged in the work I took five astronomical observations and checked the bearings of my lines with the C.P.R., C.N.R. and G.T.P. locations. On account of the season being wet the work was somewhat retarded. We worked nearly every day in the rain, and had the country been wet with swamps and muskegs, we could not have done the work in the same time. The eight iron posts provided by your Department were planted and marked according to your instructions at the following places: S.E. corner, Lot 1, Con. 3. N.E. corner, Lot 11, Con. B. N.E. corner, Lot 8, Con. 2. S.E. corner, Lot 31, Con. A. N.W. corner, Lot 22, Con. 2. S.W. corner, Lot 22, Con. 2. S.W. corner, Lot 60, Con. A., and at S.W. corner, Lot 70, Con. B.

Regarding the old posts and lines of the former survey, I beg leave to say that the only evidence of a former survey I found was a post at the south-east corner of Lot 1, Concession B, and the side line between Lots 45 and 46, Concession A. This line and the line of my survey ran almost parallel for about 20 chains and only a few links apart, but before the end of the concession was reached the two lines crossed.

Many of the settlers along the Dawson Road were working on the railways as section men, and all those whom I had conversation with were quite satisfied to stay with their homesteads. All the buildings erected by the settlers are shown on the plan and field notes.

Whalen & Co., of Port Arthur, had a tie camp on the Matawin River bank on Lot 38, Concession A, where about one million railroad ties were taken out of the river and shipped to different points east and west. During the progress of the work the company employed about 75 men.



With regard to fish and game beg leave to say that this section is well supplied with rabbits and partridge, and a few wolves and porcupine. We tried the Matawin River and also the smaller streams but were not successful in getting any fish. The section is also well supplied with wild fruit, such as raspberries, strawberries, cranberries, and in one place we found quite a number of wild plums.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) E. D. BOLTON,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 35.*

RE-SURVEY OF PARTS OF THE TOWNSHIPS OF BLAKE AND CROOKS DISTRICT OF  
THUNDER BAY.

FORT WILLIAM, ONT., 7th April, 1913.

Sir,—In accordance with your instructions of the 7th November last, I have made a re-survey of certain parts of the Townships of Blake and Crooks.

As there was urgent need of certain lines in Crooks, I made a flying trip there, afterwards returning to the city for more men and outfit. Then, starting in Blake, I worked south, cleaning up the work as I went.

I commenced by re-opening two miles of the resurvey lines of O.L.S. Macdougall, and then ran south between sections 9 and 10, using this as a base line. Evidences of the old lines were very hard to find, and on this line between sections 9 and 10, I ran almost to the south limit of the township before finding any satisfactory evidences of the old lines to check by. The same is true to a great extent of the east and west lines, though once or twice in spruce swamps we found good evidences of the line.

A great number of comparatively recent compass lines have been run in Blake township, oftentimes blazed, and tending to confusion. At one point, too, I found a line with very old blazes, which, while not agreeing closely with our north and south chainage on our base line, I was inclined to accept it, until after opening it up for over a mile, I found it swung gradually to the south. In Crooks, too, I found lines well marked with old blazes, which were apparently run to mark mining claims which were never taken up. These lines, when first starting in, tended to create confusion and mislead.

A great number of lines had to be first run as trial lines and then rerun and opened up on the true line, after checking up on blazes two miles and more from the starting point.

Bearing trees or posts we very rarely found, except where we ran to mining locations, where they could usually be found. In this country the greater part of which has been lumbered over, and frequently burnt over, there were sometimes stumps standing which would seem to indicate the position of the bearing trees, but there was no means of identifying them, the tops being gone and the blaze. It seems that if in addition to marking "B.T." on a tree in the usual way, some means of marking the tree lower down could be adopted, such as cutting three "V" marks on the upper part of the root beneath it, it would be very useful evidence when the "B.T." was gone, even if it were not given the same standing.

There is much good land in the two townships, particularly in Crooks. The country covered in Blake is very broken, and in many places it will be impossible to lay out roads along lot lines. The land will oftentimes rise steadily for possibly a mile and then drop almost sheer for from one to two hundred feet, but the land at top and bottom may be equally good.

There is not much large standing timber, but a great deal of old burnt pine stumps standing, making cutting very heavy in parts. In Blake there is some very fair pine scattered through, while in Crooks in addition to a little pine, there is, south of the Cloud River, quite a little pulpwood.

Every effort was made to plant the posts firmly in the ground, an old axe being carried for the purpose of cutting into the frost, but where the ground was stony, this was not very satisfactory, and I would suggest that you allow me to send two men over the lines as soon as the frost is out, to reset them. I would furthermore suggest the desirability of planting iron posts alongside the wooden ones on at least one line through these townships.

As all available teams had been hired at a premium by the Superior Brick Co., whose plant is now under construction at Rosslyn, it was costly to hire teams, and oftentimes almost impossible to get them at all. This caused me to move camp as little as possible, involving very long walks in difficult country, so that in the middle of winter it was necessary to leave camp before daylight, and often return after dark in order to accomplish anything. This was hard on the party, and with the comparative closeness of the railway, and the high wages being paid by the pulpwood camps in the vicinity, made it very difficult to hold the party together. Only the hiring of the best cook obtainable and putting on the best possible board held some of the men. My instructions were to hire the settlers as far as possible, but apart from my first trip into Crooks, all settlers willing to work were already engaged.

As instructed, I have not prepared any regular field notes or plans of the townships, but send herewith an outline plan showing the lines run.

I also beg to enclose accounts and vouchers in triplicate, and pay-list, in all amounting to \$2,630.80, of which I have already received \$2,000.00 on account.

I would also request that some allowance be made for camp equipment. I spent \$175 in this way, and when the work was done it was of comparatively little value. For instance, I spent \$57.80 on tents but allowing for the cost of necessary repairs, they are probably not worth more than \$20. I spent \$75 on hardware, stoves and snow shoes, the latter are good for a lot of wear yet, but the heating stoves had to be renewed in the middle of the season, and the new ones were hardly worth bringing in on the completion of the work, and the other hardware was of little value. I bought \$42 worth of blankets to supplement the supply of the men.

Allowing for the cost of the necessary cleaning, they are not worth more than half of this now. Under these circumstances, I would request that some allowance be made on this account.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) E. R. BINGHAM,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 36.*

SURVEY OF THE TOWNSHIP OF MATHIEU, DISTRICT OF RAINY RIVER.

FORT FRANCES, Ont., Dec. 27th, 1912.

SIR,—I have the honor to submit the following report on the survey of the Township of Mathieu, in the District of Rainy River, performed under instructions from your Department, dated the twenty-ninth day of May, A.D. nineteen hundred and twelve.

This township is bounded on the south by the Township of Dewart, on the west by the township of Morson, on the north by Sabaskong Bay of the Lake of the Woods, and on the east by unsurveyed lands.

I commenced work on the twenty-seventh day of July, having moved in by boat from the Town of Rainy River to the head of navigation on Big Grassy River; thence packing in to the west boundary of the township.

The east boundary of Morson and the north boundary of Dewart were cleaned out and the survey of the township of Mathieu commenced at its south-west angle. I did not find this point to agree with the field notes of the Township of Morson. I found four posts, a wooden and an iron post marked "Dewart" and "Tovell" and a wooden and an iron post marked "Morson." These posts stand all together at a distance of sixty-three links east from a two-inch-square iron post marked R. XXIV. XXV. E., so that there is no jog between Morson and Dewart as shown in field notes. I commenced at these four posts marking the iron post marked Morson with the name "Mathieu" on the east and I then laid out the second and other concessions and the side lines, west and north, astronomically, as directed in the instructions as nearly as possible.

The iron posts already planted at the south-east and the north-east angles of the Township of Morson were marked on their correct sides "Mathieu." The iron post at the north-east angle of the Township of Dewart was also marked on its correct side. Other iron posts, supplied by your Department, were planted, properly marked, as directed, alongside wooden posts, one at the intersection of the south boundary with the line between lots six and seven, one at the intersection of the



line in front of the fourth concession with this line of lots, and one at the lake shore on this same line; also one at the intersection of the west boundary with the line between concessions three and four, one at the intersection of the line between these concessions with the east boundary and one on the east boundary at the shore of the Lake of the Woods. These were planted with the view of insuring permanency for the survey in case of fire.

All lines run were well opened and blazed, substantial wooden posts were planted, as directed, every possible care being taken in the planting and marking of the posts, while frequent observations of Polaris, at eastern elongation, were taken to insure the correctness of the directions of the lines. The shore line of Sabaskong Bay of the Lake of the Woods was carefully traversed, courses being tied in to each post on the lake shore in passing.

The work itself was proceeded with in the ordinary manner, the excessive length of time taken in making the survey was entirely due to wet weather.

The township as a whole is rough, rocky and broken. The portion of it fit for agricultural purposes being very small, twenty-five per cent. at the most, consisting principally of a narrow belt along the valley of the Big Grassy River, and one lot in the valley of the Split-Rock River. A few good pieces could also be picked out along the shore of Sabaskong Bay. The south-west quarter of the township is composed of jack pine sandhills and muskeg, the south-east quarter is rock and muskeg, the north half is extremely rough and rocky.

For timber the township is of little value, there being nothing on it except small second growth jack pine growing on old brulé, with the exception of lots ten, eleven and twelve in concessions four, five, six and seven, which lots partially escaped the fire and have some good timber on them, chiefly jack pine with poplar and spruce and a few scattering red and white pines.

No indications of valuable minerals were observed; the magnetic needle holding a steady variation of eight degrees and thirty minutes east throughout the township. Samples of the country rock have been sent to your Department.

Accompanying this report are plan, field notes, timber plan and list of squatters.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) D. J. GILLON,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.



*Appendix No. 37.*

## ALGONQUIN PROVINCIAL PARK.

ALGONQUIN PARK, 31st October, 1913.

HONOURABLE SIR,—I beg to hand you my annual report of the Algonquin Provincial Park for the fiscal year ending the 31st day of October, 1913.

This was one of the finest years from a tourist's standpoint in my recollection, and hundreds of visitors from Canada, the United States, Great Britain, and other countries, took advantage of it to spend their holidays on our splendid lakes.

The Park has also become popular as a winter resort, and the Highland Inn was patronized to its full capacity; in fact the management at times were not able to take all who wished to come. This is gratifying for several reasons. It proves that real benefit is being derived from the Park as a health and pleasure resort, and that one of the ends for which the Park was set aside has been accomplished; also, that the people of the Province are taking a deep interest in the Provincial Park and are in sympathy with the work being done in it.

A considerable revenue is now derived from fishing licenses and rents, as well as furs taken and live animals sold, amounting for the past year to: fishing licenses, \$1,782; rents, \$787.50; furs, \$5,424.10; live animals, \$605.25; fines, \$50; sale of logs, \$405.60; sundries, \$3.50; total, \$9,057.95.

The fishing during the past season has been good and some fine specimens were taken, the largest coming under my notice being a salmon trout seventeen pounds in weight. Some interesting specimens were taken in Delano lake that had the appearance of a hybrid, between the salmon and speckled trout. They have the form of the speckled trout with its markings, but have a very decidedly forked tail. One of these is described by Prof. Prince, of the Department of Marine and fisheries, Ottawa, in the following letter:—

OTTAWA, JANUARY 19TH, 1914.

DEAR MR. BABLETT:

The specimen of peculiar trout which you sent some time ago has been carefully examined, and as I already gave you a hint, it really appears to be a hybrid, namely, the brook-trout and the grey trout (or lake trout).

The dental features and the nature of the vomer, as well as the peculiar external color and the shape of the tail, all indicate a combination of two species, which as you know, are now separated further than they used to be.

The brook-trout and the lake-trout were at one time included under the same Genus, *Salvelinus*, but they have appeared to be so distinct as to now be separated into two Genera; the grey-trout being put in the Genus *Cristivomer*, a hybrid specially connected with two separate Genera is a remarkable occurrence, and some mention of it should be made in the sporting journals, as it is an exceedingly interesting occurrence.

You will remember that more than a year ago, in June, 1912, Mr. Gall sent a specimen of a fish which was regarded as a hybrid, and when I come to see you again, I should like to talk with you about the occurrence of the hybrid specimens, as the nature of the egg and the feature of hybridisation are so remarkable scientifically that it is worth while trying some experimental work to see if the hybrids can be produced artificially.

With all good wishes for the season, and thanking you for sending the specimens, I am,

Yours faithfully,

EDWARD E. PRINCE,

*Dominion Commissioner of Fisheries.*

A number of salmon trout fry and fingerling black bass were put into the lakes near headquarters.

We have a fine site for a fish hatchery, and I hope you will some day in the near future establish one here. We could then keep our lakes stocked and also supply outside sections.

Game of all kinds has very much increased. A number of beaver, otter, mink, marten, fisher, musk-rat, raccoon and ermine were taken and the skins disposed of, realizing \$5,424.10.

Live beaver and some live mink were also sold to the value of \$605.25. The former went to points in Prince Edward Island, Ontario, and the United States. There now being a great demand for live animals of all kinds for fur-farming purposes, we are in compliance with your instructions, preparing to supply the same from the Park. The prices for live animals are much greater than for pelts, and the departure is strictly in keeping with one of the objects in view when establishing the park, viz.: the multiplication and spread of our fur-bearing animals. The annual increase of these in the Park is so great that the number taken in the past three years has caused no perceptible diminution.

The capercallie introduced some years ago are not making the showing I would wish, although several were reported by reliable parties, as having been seen last year. They seem, however, to be working to the north and prefer the pine woods.

Wolves are still numerous and do a great deal of damage among the deer. We have secured sixty of the pests, and know that many were poisoned that our men did not get, owing to the snow covering up the tracks before they were found.

This has been an unusually good year for the deer, and fewer were killed by the wolves during the past winter than for any one of the past ten years. Deer are very abundant and moose are becoming more so; there is a yard of the latter within a few miles of headquarters.

Fires have been bad, a great many having been started by the locomotives on the Grand Trunk railway. I am glad, however, to be able to report no damage done in the Government limits, and elsewhere in the Park—most of them were over old burns. The Gillies Bros. had some pine burnt which is now being taken out. I should like to mention here that Mr. Colman, Superintendent of the Ottawa Division of the Grand Trunk railway, gave every assistance in his power and rushed men to the scene of the fires at once, also, gave strict orders to his men that they must give immediate assistance in case of fire.

The Grand Trunk railway have built a hotel and six cottages at Smoke Lake for the accommodation of visitors. These are of cedar logs, and fitted with all modern conveniences, such as fire-places, baths, etc. Each cottage will accommodate six to ten people, and there are several rooms in the main building. They have also guides' house, stables, etc. A like plant on a larger scale is now under construction at Big Island Lake. They have built a road from the Highland Inn at headquarters to each of these points, and run a stage on both of them.

The Canadian Northern Railway are pushing their branch through the north end of the Park, the steel being laid as far as Cedar Lake from the intersection with the Grand Trunk Railway to the west. This line follows some of our finest lakes, Kioshkoqui, Mink, Couchon, Aura Lee and Cedar, thence down the Petewawa to Pembroke. It will be a very popular route with the angler and canoeist, as these

lakes and rivers abound with the finest speckled trout and salmon trout. A great number of men are still employed on this line in the Park from Cedar Lake east.

Our staff has been composed of twenty-six men and superintendent. During the trapping season their time has been taken up in patrolling the sections allotted them, two men travelling together. Owing to the constant demand for the men at fires, I have not been able to get all the shelter houses built I had hoped. We have built a very fine one at White Trout Lake, repaired several others, and cut out a lot of portages. The superintendent's house at headquarters has been re-shingled and fresh drains laid down from both houses. Joe Lake dam has also been substantially repaired, so that a regular head of water can be held at this point, which is very necessary.

I have the honour to be, Honourable Sir,

Yours very sincerely,

The Honourable W. H. Hearst,

G. W. BARTLETT.

Minister of Lands, Forests and Mines,  
Toronto.

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*Appendix No. 38.*

## REPORT OF THE FORESTRY BRANCH.

SIR,—I have the honor to present herewith the First Annual Report of the Forestry Branch for the year 1913.

During the autumn of 1912, I was transferred from the Department of Agriculture to the Department of Lands, Forests and Mines. Since my transfer, the work in this Branch, has been largely concerned with general questions of reforestation and particularly the administration of the Norfolk Forest Station. This Branch has also had charge of the fire protection, along the railways in Ontario which are under the jurisdiction of the Board of Railway Commissioners for Canada. In addition to the above duties, various forest investigations and minor reports have been made and a course of lectures in forestry has been delivered to the students at the Ontario Agricultural College.

## NORFOLK FOREST STATION.

The Norfolk Forest Station was started in 1909 and to-day contains 1,500 acres of land. This land is composed of sandy ridges and is made up of second-growth pine and oak; abandoned fields and blow sand ridges. The chief work being carried on at this station is the production of nursery stock for local planting and for distribution to prospective planters, throughout the Province.

## FOREST NURSERIES.

The Forest Nurseries have produced during this last season a very good lot of planting material. There is at present in the nurseries 846,000 plants in nursery lines and 400,000 seedlings in seed beds.

The following is an approximate estimate of the nursery stock:—

*In Nursery Lines.*

White Pine . . . . .	227,000
Scotch Pine . . . . .	266,000
Red or Norway Pine . . . . .	92,500
White Cedar . . . . .	40,000
Bull Pine . . . . .	7,000
Black Locust . . . . .	80,000
White Ash . . . . .	20,000
Sugar Maple . . . . .	60,000
Soft Maple . . . . .	20,000
Black Walnut . . . . .	10,000
Butternut . . . . .	4,000
Miscellaneous . . . . .	20,000

*In Seed Beds.*

White Pine . . . . .	300,000
Red or Norway Pine . . . . .	100,000
Jack Pine . . . . .	50,000
Miscellaneous . . . . .	50,000



## DEMONSTRATION PLANTATIONS.

At this station, about 300,000 young forest trees have been planted composed chiefly of:—white pine, red pine, Scotch pine, jack pine, black locust, red oak, chestnut and white ash.

The earliest plantings of 1909, in which white pine, Scotch pine and jack pine were planted upon pure sand formations, where the sand was blowing considerably, indicate that the best results will be obtained by the use of jack pine and Scotch pine. Many of the Scotch pine and jack pine, which were about twelve to fifteen inches in height at time of planting (1909) are now (1913) from four to six feet in height. Upon the better classes of soil white pine is proving more satisfactory and will be used wherever possible, as its ultimate value makes it more desirable than the other pines.

A plantation made with black locust in (1909) has not proven altogether satisfactory, although the growth during the first two years was quite remarkable, many trees having reached a height of eight to ten feet. During the last winter these trees were badly killed with the frost and the value of this tree, from the standpoint of hardiness, is as yet uncertain.

Various experiments are being conducted at this station along the lines of forest planting, which should give valuable data as to cost of planting; desirability of the various species and general results, which should prove of value in years to come. It is somewhat early to report upon the comparative values of planting in connection with this work.

## FOREST TREE DISTRIBUTION.

In addition to an Experimental Station in Norfolk, it is desirable to demonstrate forest planting throughout the older parts of Ontario.

The percentage of well-stocked woodlands in Older Ontario is becoming very low. Many counties of Southern Ontario, possess less woodland than is to be found in the older countries of Europe. While the southern part of Ontario is largely made up of valuable agricultural land, there is still a large percentage of untilled soil that should have never been denuded. These waste areas are composed of steep hillsides; sandy or gravelly ridges and rocky outcroppings. It is highly desirable that the possibility of reforesting these areas, at a reasonable cost, should be demonstrated throughout Ontario.

As the necessity and practicability of reforesting is little appreciated in this new country, the Government has been carrying on, since 1905, a system of distributing forest trees to those desiring to plant as outlined in the following circular:—

## CIRCULAR No. 8.

1. The Department of Lands, Forests and Mines of the Province of Ontario desires to assist farmers to improve their woodlots, and reforest waste portions of the farm. To accomplish this a system of co-operation is to be carried out as follows:

2. The Department, as far as the means at its disposal will permit, will assist in the growing of a forest plantation or woodlot, by directing through one of its officers as to the preparation of soil, varieties to plant and manner of planting, and as to care after planting.

3. The Department will also endeavor to furnish seedling trees or cuttings as planting material free of charge, but the person receiving such material shall pay the cost of transportation by express to nearest express office. 1,000 to 2,000 plants will range from 100 to 200 lbs. in weight. This season (1914) the trees will be shipped by

Canadian Express from St. Williams, Norfolk County. If the applicant desires to know about what the express charges will be he should find out from his local express agent the rate per 100 lbs. from the above shipping point. It is not considered safe to ship these plants by freight, and this Department cannot receive money to prepay transportation charges. Care should be exercised to fill in properly Post Office and Express Office in Application Blank.

4. The Department advises that those undertaking waste land planting make a start of one acre the first season. Two acres will be the largest area for which the Department will undertake to furnish planting material in any one year. Larger areas may be planted by arranging to continue the work throughout successive seasons. Prospective planters should read pages 15 to 30 of Farm Forestry Bulletin 209, Ontario Department of Agriculture, which will give a more detailed idea of what waste land planting means. Plants should be placed from 4 to 5 feet apart each way.

At 4 feet spacing an acre will require 2,722 trees.

At 5 feet spacing an acre will require 1,742 trees.

Make an estimate of your acreage and fill in the blank in application form accordingly.

5. It shall be understood that the owner, on his part, must prepare the soil, plant and care for the trees, and do all the actual work in connection with the plantations, in accordance with the directions of the officers of the Department. The owner shall also agree to provide protection for the planted trees against animals by fencing or otherwise, and where necessary, against fire by some effective means.

6. The Department prefers that plantations be made on such waste portions of the farm, as steep hillsides, light sandy, rocky or gravelly spots, swamp land, portions of farm cut off by streams or otherwise. Such land can usually be profitably devoted to wood production if proper species are planted. However, in certain localities without woodlands it may be found advisable to plant on good agricultural soil, if the owner so desires. In cases where tillable land is to be planted it will be advisable to summer fallow. Cultivation for one or two seasons after planting on good soils, where rank weed growth might follow, will be of great benefit to plantation.

7. The Department emphasizes the value of planting evergreen belts about open borders of woodlots. Planting in the woodlot is discussed on pages 11 and 12 of Bulletin 209.

8. It will be noticed that this system is co-operative in character. The Department furnishes planting material and expert advice, but does not guarantee to furnish any specific quantity of planting material. The Department reserves the right to accept or refuse applications if, in the opinion of the officers in charge, the location offered does not afford satisfactory facilities for the experimental and educational features of the work.

9. It is desired to make this work of educational value, and the owner will be required to allow public inspection of the planted areas, whenever this can be done without injury to the other crops.

10. Attention is called to the fact that the Forestry Department furnish trees only for forest plantation work on waste land, or land which is undesirable to till for annual crops. No fruit trees, ornamental trees or shrubs, trees for town or village lots will be supplied. Norway Spruce for hedges or windbreaks will not be supplied by this Department. As may be inferred from Bulletin 209, the planting material sent out under this system is unfit for roadside or ornamental planting, but is intended to make forest plantations.

11. All applications for material to be supplied this spring (1914) must be in on or before the 31st of March, 1914. Applications will be filled in order of their arrival. Late applications may have to be held over till next season if the material is exhausted.

12. Upon applying to the Forestry Branch, Parliament Buildings, Toronto, the applicant will be furnished with a blank form for the purpose of describing the area it is proposed to plant, which should be carefully filled out and returned to the Department.

Since the inception of this work about 2,000,000 forest plants have been distributed throughout Older Ontario. The annual distribution now reaches about 400,000, and demonstration plantings on waste land have been made in nearly every county of Older Ontario.

In addition to the distribution of trees for waste land planting, the Branch sends out collections of evergreens to public schools carrying on school gardening, so that the children may become familiar with the propagation of forest seedlings.

#### RAILROAD FIRE PROTECTION.

During this past season the Department has taken advantage of the Dominion Board of Railway Commissioners' General Order, to prevent fires along the right of way of railways coming under the jurisdiction of the Board.

The Board provides the legal measures to carry out fire protection and the Province through inspection and supervision sees that the Board's Order is fulfilled. The Provincial Forester was made Provincial Fire Inspector under the Board, with three District Fire Inspectors. The chief duties of these inspectors in carrying out the provisions of the Order, are as follows:—

To examine and report on locomotive equipment in relation to fire danger.

To report upon right of way conditions, in relation to fire hazard.

To supervise the disposal and burning of debris along the right of way.

To report all fires occurring along the right of way, giving cause and full description as far as possible.

The Text of the Board's General Order is contained in the following:—

#### DOMINION BOARD OF RAILWAY COMMISSIONERS (ORDER No. 107).

2. Until further order, every railway subject to the legislative authority of the Parliament of Canada, under construction or being operated by steam, shall, unless exempted by a special order of the Board, cause every locomotive engine used on the said railway, or portion of railway, being constructed or operated by it, to be fitted and kept fitted with netting mesh as hereinafter set forth, namely:

(a) On every engine equipped with an extension smoke-box, the mesh shall not be larger than  $2\frac{1}{2} \times 2\frac{1}{2}$  per inch of No. 10 Birmingham Wire Gauge, and shall be placed in the smoke-box so as to extend completely over the aperture through which the smoke ascends, the openings of the said mesh not to exceed a quarter of an inch and one-sixty-fourth (that is, seventeen sixty-fourths) of an inch to the square.

(b) On every engine equipped with a diamond stack, the mesh shall not be more than  $3 \times 3$  per inch of No. 10 Birmingham Wire Gauge, and shall be placed at the flare of the diamond of the stack, so as to cover the same completely, the openings of said mesh not to exceed three-sixteenths and one sixty-fourth (that is, thirteen sixty-fourths) of an inch to the square.

#### 3. Every such railway company shall cause:

(a) The openings of the ashpans on every locomotive engine used on the railway, or portion of railway, operated or being constructed by it, to be covered, when practicable, with heavy sheet iron dampers; and, if not practicable, with screen netting dampers  $2\frac{1}{2} \times 2\frac{1}{2}$  per inch of No. 10 Birmingham Wire Gauge, such dampers to be fastened either by a heavy spring or by a split cotter and pins, or by such other method as may be approved by the Board.

(b) Overflow pipes from lifting injectors, or from water pipes from injector-delivery pipe, or from boiler, to be put into the front and back part of the ashpans and used from the first day of April to the first day of November, or during such portion of this period as the Board may prescribe, for wetting ashpans.



4. Every such railway company shall provide inspectors at terminal or divisional points where its locomotive engines are housed and repaired; and cause them, in addition to the duties to which they may be assigned by the officials of the railway companies in charge of such terminal or divisional points,

(a) To examine at least once a week,

- (1) The nettings;
- (2) Dead Plates;
- (3) Ashpans;
- (4) Dampers;
- (5) Slides; and
- (6) Any other fire-protective appliance or appliances used on any and all engines running into the said terminal or divisional points.

(b) To keep a record of every inspection in a book to be furnished by the railway company for the purpose, showing:

- (1) The numbers of the engines inspected;
- (2) The date and hour of day of such inspection;
- (3) The condition of the said fire-protective appliances and arrangements; and
- (4) A record of repairs made in any of the above mentioned fire-protective appliances.

The said book to be open for inspection by any authorized officer of the Board.

(c) In case any of the said fire-protective appliances in any locomotive are found to be defective, said locomotive shall be removed from service and shall not (during said prescribed period) be returned to service, unless and until such defects are remedied.

(d) Every such railway company shall also make an independent examination of the fire-protective appliances on all the locomotives of such company, at least once each month, and the conditions of such fire-protective appliances shall be reported direct to the Chief Mechanical Officer of the railway company, or other chief officer, held responsible for the condition of the motive power of the said company.

5. No employee of any such railway company shall—

(a) Do, or in any way cause, damage to the netting on the engine smoke-stack or to the netting in the front end of such engine;

(b) Open the back dampers of such engine while running ahead, or the front dampers while running tender first, except when there is snow on the ground, and it is necessary to take such action in order to have engine steam properly;

(c) Or otherwise do or cause damage or injury to any of the fire-protective appliances on the said engines.

6. No such railway company shall permit fire, live coals, or ashes to be deposited upon its tracks or right of way, unless they are extinguished immediately thereafter, except in pits provided for the purpose.

7. No such railway company shall burn lignite coal on its locomotive engines as fuel for transportation purposes, unless otherwise ordered by the Board,—lignite coal consisting of and including all varieties of coal between peat and bituminous, with a carbon-hydrogen ratio of 11.2 or less, such ratio being based on analysis of air-dried coal.

8. Every such railway company shall establish and maintain fire-guards along the route of its railway as the Chief Fire Inspector may prescribe. The nature, extent, establishment and maintenance of such fire-guards shall be determined as follows:

(a) The Chief Fire Inspector shall each year prepare and submit to every such railway company a statement of the measures necessary for establishing and maintaining the routes of such railways in a condition safe from fire, so far as may be practicable.

(b) Said measures may provide for the cutting and disposal by fire, or otherwise, of all or any growth of an inflammable character, and the burning or other disposal of debris and litter, on a strip of sufficient width on one or both sides of the track; the ploughing or digging of land in strips of sufficient width on one or both sides of the track; and such other work as may, under the existing local conditions and at reasonable expense, tend to reduce to a minimum the occurrence and spread of fire.



(c) Said statements of the Chief Fire Inspector shall be so arranged as to deal with and prescribe measures for each separate portion of such railway upon and adjacent to which the fire risk calls for specific treatment. The intention shall be to adjust the protective measures to the local conditions and to make the expense proportionate to the fire risk and possible damage.

(d) Said statements of the Chief Fire Inspector shall prescribe dates on or within which the foregoing protective measures shall be commenced and completed, and the fire guards maintained in a clean and safe condition.

(e) No such railway company shall permit its employees, agents, or contractors to enter upon land under cultivation, to construct fire-guards, without the consent of the owner or occupant of such land.

(f) Wherever the owner or occupant of such land objects to the construction of fire-guards, on the ground that the said construction would involve unreasonable loss or damage to property, the company shall *at once* refer the matter to the Board, giving full particulars thereof, and shall in the meantime refrain from proceeding with the work.

(g) No agent, employee, or contractor of any such railway company shall permit gates to be left open or to cut or leave fences down whereby stock or crops may be injured or to do any other unnecessary damage to property, in the construction of fire-guards.

9. In carrying out the provisions of Section 297 of *The Railway Act*, which enacts that "the company shall at all times maintain and keep its right-of-way free from dead or dry grass, weeds and other unnecessary combustible matter," no such railway company or its agents, employees or contractors shall, between the first day of April and the first day of November, burn or cause to be burned any ties, cuttings, debris, or litter upon or near its right-of-way, except under such supervision as will prevent such fires from spreading beyond the strip being cleared. The Chief Fire Inspector or other authorized officer of the Board may require that no such burning be done along specified portions of the line of any such railway, except with the written permission or under the direction of the Chief Fire Inspector or other authorized officer of the Board.

10. The railway company shall provide and maintain a force of fire rangers fit and sufficient for efficient patrol and fire-fighting duty during the period from the first day of April to the first day of November of each year; and the methods of such force shall be subject to the supervision and direction of the Chief Fire Inspector or other authorized officer of the Board.

11. The Chief Fire Inspector shall, each year, prepare and submit to each and every railway company a statement of the measures such railway companies shall take for the establishment and maintenance of said specially organized force. Said statements among other matters may provide for—

(a) The number of men to be employed on the said force, their location and general duties, and the methods and frequency of the patrol.

(b) The acquisition and location of necessary equipment for transporting the said force from place to place, and the acquisition and distributing of suitable fire-fighting tools; and

(c) Any other measures which are considered by him to be essential for the immediate control of fire and may be adopted at reasonable expense.

12. Whenever and while all the locomotive engines used upon any such railway, or any portion of it, burn nothing but oil as fuel, during the aforesaid prescribed period, under such conditions as the Board may approve, the Board will relieve the said railway of such portion of these regulations as may seem to it safe and expedient.

13. Every such railway company shall instruct and require its sectionmen and other employees, agents and contractors to take measures to report and extinguish fires on or near the right-of-way as follows:—

(a) Conductors, engineers, or trainmen who discover or receive notice of the existence and location of a fire burning upon or near the right-of-way, or of a fire which

threatens land adjacent to the right-of-way, shall report the same by wire to the Superintendent, and shall also report it to the agent or persons in charge at the next point at which there shall be communication by telegraph or telephone, and to the first section employees passed. Notice of such fire shall also be given immediately by a system of warning whistles.

(b) It shall be the duty of the Superintendent or agent or person so informed to notify immediately the nearest forest officer and the nearest section employees of the railway, of the existence and location of such fire.

(c) When fire is discovered, presumably started by the railway, such sectionmen or other employees of the railway as are available shall either independently or at the request of any authorized forest officer proceed to the fire immediately and take action to extinguish it; provided such sectionmen or other employees are not at the time engaged in labours immediately necessary to the safety of trains.

(d) In case the sectionmen or other employees available are not a sufficient force to extinguish the fire promptly, the railway company shall, either independently or at the request of any authorized forest officer, employ such other labourers as may be necessary to extinguish the fire; and as soon as a sufficient number of men, other than the sectionmen and regular employees, are obtained, the sectionmen and other regular employees shall be allowed to resume their regular duties.

(e) The provisions of this section shall apply to all fires occurring within 300 feet of the railway track, unless proof shall be furnished that such fires were not caused by the railway.

14. Every such railway company shall give particular instructions to its employees in relation to the foregoing regulations and shall cause such instructions to be posted at all stations, terminals and section houses along its lines of railway. In case said instructions are not also carried in employees' time tables during said prescribed period, or in "operating" and "maintenance of way" rule books, they shall, previous to April 1st of each year, be re-issued to all employees concerned, in the form of special instructions. The Chief Fire Inspector may waive the above requirements in whole or in part, as to lines or portions of lines where, in his judgment, the fire danger is not material.

15. Every such railway company allowing or permitting the violation of, or in any respect contravening or failing to obey any of the foregoing regulations, shall, in addition to any other liability which the said company may have incurred, be subject to a penalty of one hundred dollars for every such offence.

16. If any employee or other person included in the said regulations, fails or neglects to obey the same, or any of them, he shall, in addition to any other liability which he may have incurred, be subject to a penalty of twenty-five dollars for every such offence.

17. The Board may, upon the application of any railway company or other party interested, vary or rescind any order or direction of the Chief Fire Inspector made pursuant to the provisions of this Order.

(Sgd.) H. L. DRAYTON,  
Chief Commissioner,  
Board of Railway Commissioners for Canada.

I have the honour to be, Sir,

Your obedient servant,

E. J. ZAVITZ,  
Forester.

The Honorable W. H. Hearst,  
Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 39.*

## SUPPLEMENTARY LIST OF LICENSED CULLERS, 1913.

(For complete list see Minister's Reports 1911 and 1912.)

NAME OF CULLER.	Post Office.
Buchan, A. ....	Fort William.
Cameron, Ronald .....	Ignace.
Cole, J. E. ....	Kenora.
Currie, J. E. ....	Kenora.
Duncan, Edward J. ....	Sturgeon Falls.
Hammond, Henry .....	Dryden.
Love, B. ....	Port Arthur.
Marr, H. J. ....	Superior Junction.
McDonald, Thos. ....	Kenora.
Nash, John .....	Kenora.
Nesbitt, Thomas .....	Kenora.
Pehill, Walter .....	Dryden.
Robertson, J. D. ....	Kenora.
Richardson, C. R. ....	Fort Frances.
Sparling, S. W. ....	Richan.
Smith, L. G. ....	Worthington.

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*Appendix No. 40.*

## MAKING SQUARE TIMBER.

Illustrations from photographs by W. D. Watt, North Bay.























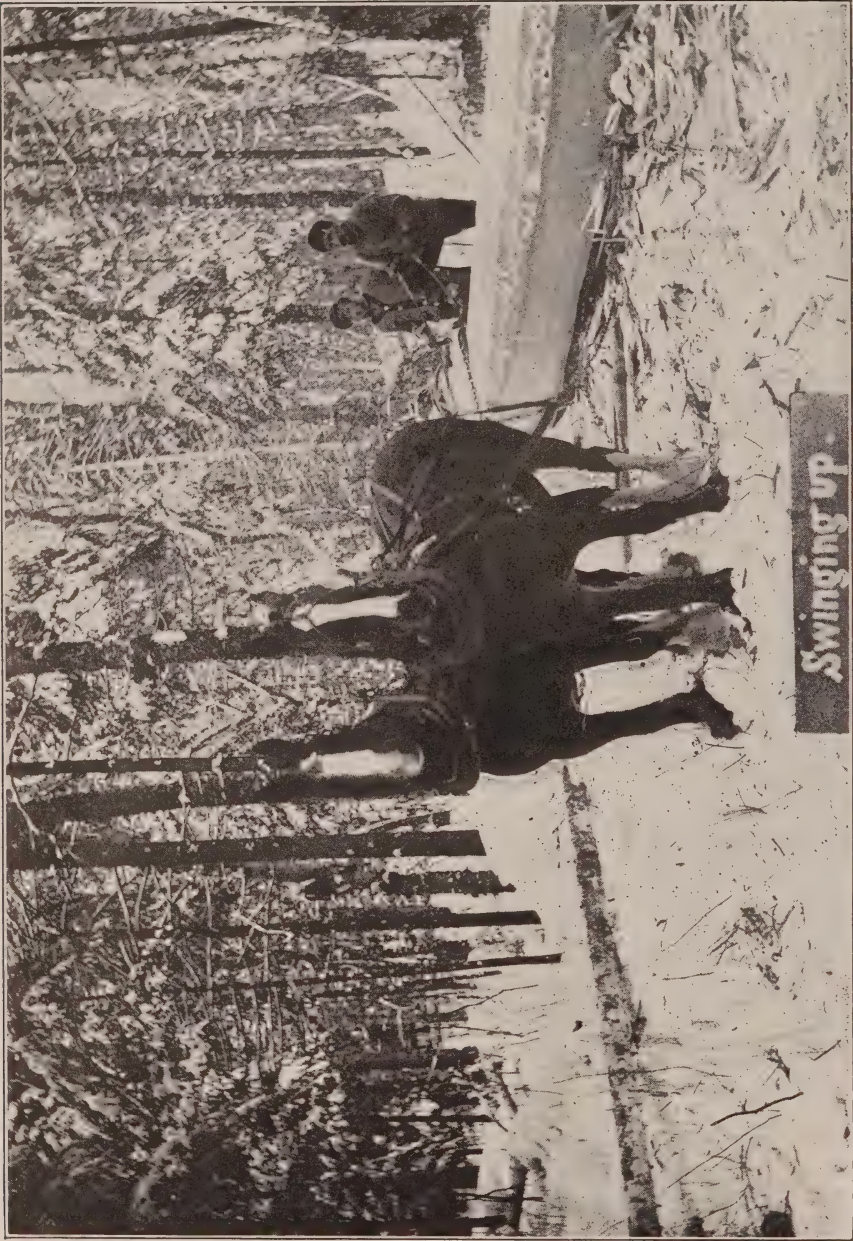


Scoring &amp; Hewing







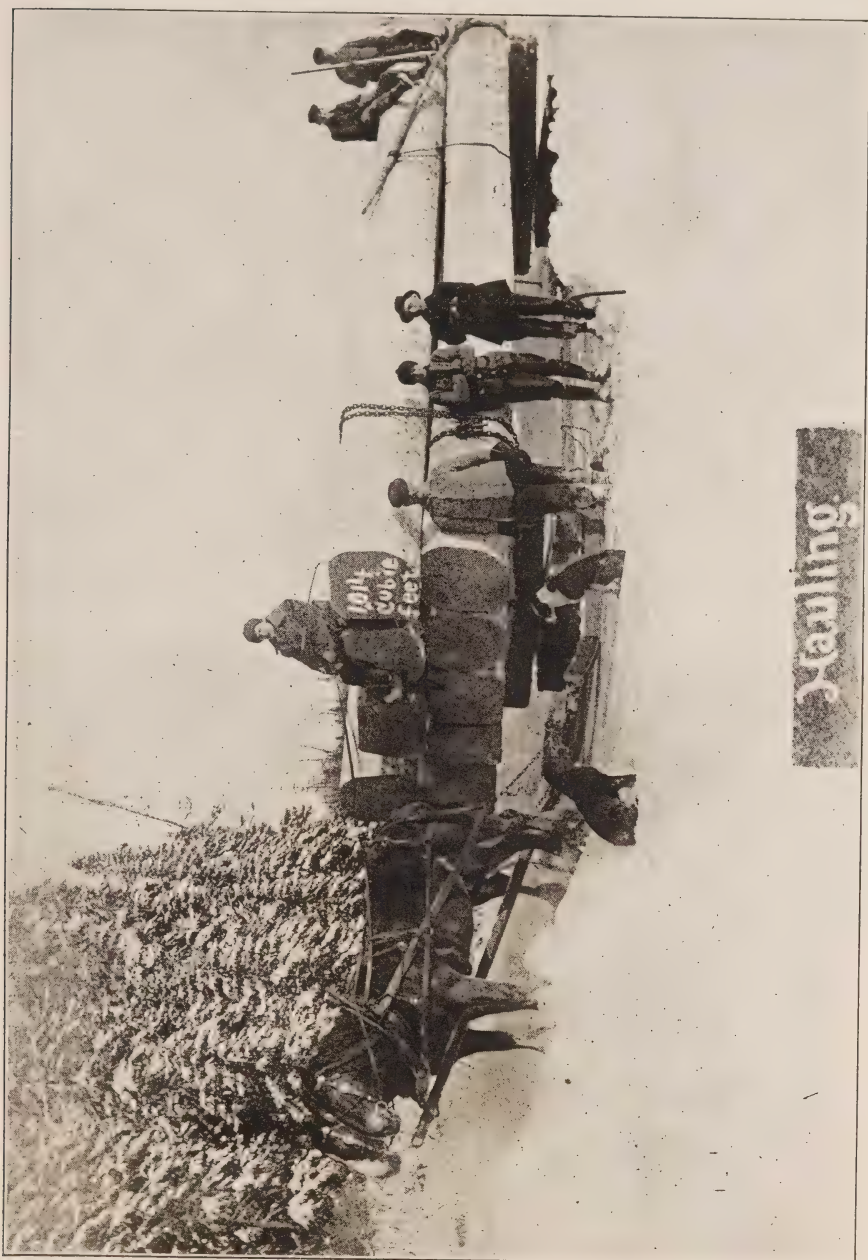


Swinging up.

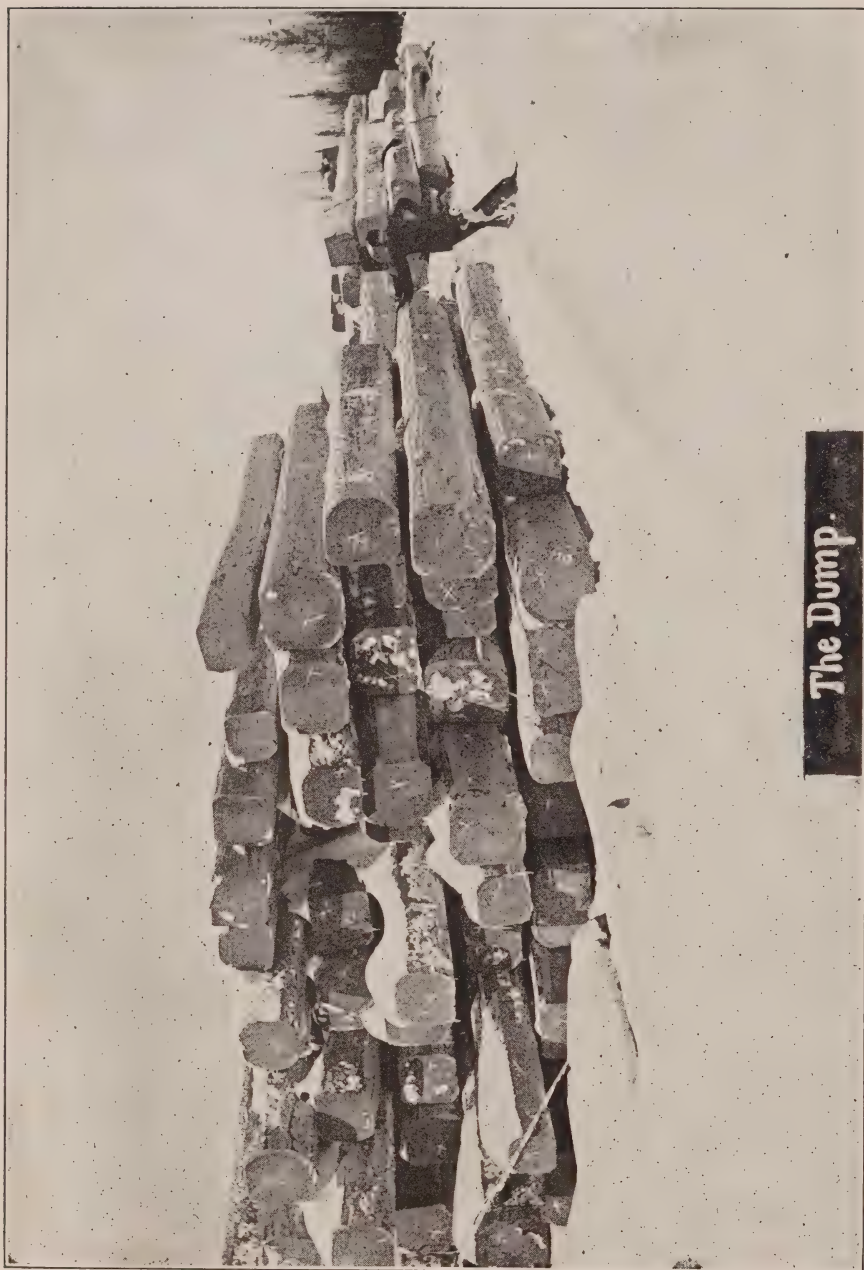












The Dump.



*Appendix No. 41.*

## REPORT ON THE CONSTRUCTION OF ROADS IN NORTHERN ONTARIO.

(Under the Provisions of 2 Geo. V., chap. 2.)

To the HONOURABLE W. H. HEARST,

*Minister of Lands, Forest and Mines.*

SIR,—I have the honor to submit a general report of the work done in the construction of roads in Northern Ontario for the season of 1913, in conformity with the Provisions of the Act 2 Geo. V., chap. 2.

Attached to this report is a description of the different works performed.

The season's work commenced in the latter part of April, except in a few instances where it was found profitable to construct bridges, and take out timber for crosslaying during the winter season.

The season was found very favorable for road construction, and considerable progress has been made. The operations extended from the Quebec boundary on the east to the Rainy River Valley and Keewatin on the west.

During the season, 764 miles of road were constructed or partly constructed and improved. Of the total mileage, 500 miles were graded, part of the graded road being macadamized or re-surfaced; 279 miles of the total were cut out of the virgin forest.

A good deal of the work of the season of 1912 consisted in cutting out new roads, which, however, owing to the wet season it was found impossible to burn off. In 1913 all of these roads have been burnt off and many of them graded and ditched. Several of the roads cut out this season, although burnt off and suitable for winter traffic, have not yet been graded.

The sum of \$1,081,172.28 has been expended during the past year, up to the 31st of October, on the operations, thus making a total expenditure out of the \$5,000,000 loan of \$1,274,255.08.

As the operations extended over a very large area it was necessary to purchase a good deal of machinery and camp outfit to carry on the work. This machinery has been well cared for, and will serve for a good many years.

In the older sections the trunk roads as constructed were carefully selected where they could be made most permanent at the least cost; and where they would serve the greatest number of people, taking into consideration the newer sections which would be opened up later on. The old roads often followed the ridges or high land and were in many instances found crooked and unsatisfactory as to grades or drainage. These were straightened out, the grades modified, and special attention given to drainage; old culverts were replaced with more permanent ones; the materials used consisting of stone, corrugated iron pipe or durable wood where it could be procured. Swampy or low lands were well drained, corduroyed in places, and re-surfaced with gravel or stone. Many of the old bridges had to be renewed.

In the district of Temiskaming along the line of the Temiskaming and Northern Ontario Railway and its branches, and along the Grand Trunk Pacific Railway, east and west from the Town of Cochrane, it was found necessary, besides constructing trunk roads along the boundaries of townships and through



the centres, to construct a good many short roads in the interior of the townships, in order to give settlers who had located on their lands, and were making substantial clearings, an outlet to these trunk roads. This also was found necessary, inasmuch as there were few settlers, children had to walk long distances in order to reach a school, and many miles of road had to be made for that purpose.

I am glad to be able to report that the work of the season of 1912 appears to have given very much encouragement to the incoming settlers, and this last year has witnessed more *bona fide* work on the land by the settlers than I have previously observed for many years. I refer more particularly to the country in the vicinity of the town of Cochrane and along the line of the Temiskaming and Northern Ontario Railway from Cochrane south to Englehart and Earleton, and along the Charlton branch to Charlton. Large clearings with good substantial farm buildings are to be met with almost everywhere.

Along the roads constructed in 1912 most of the lots have been settled upon and small clearings made, and I have every reason to believe that if the work, as it is now being carried on, is continued for a few years there will be found in the Claybelt along the Temiskaming and Northern Ontario Railway and Grand Trunk Pacific Railway settlements as prosperous as are to be found in the district of Rainy River, or in the country in the vicinity of Haileybury and New Liskeard.

From my experience during the last two seasons in the construction of roads north of Englehart and over the height of land, I am the more fully confirmed in my opinion, and have not the smallest doubt of a successful future from an agricultural standpoint, for that district, provided that, as at present, settlement for the next few years is confined as far as practicable, to the most promising areas, so as to ensure large clearings whereby the climatic conditions may be improved. Little or no difficulty was met with in draining all the roads in the Claybelt which were graded and ditched last season. Much difficulty, however, is found in making permanent roads, for want of gravel or stone, which is seldom met with in that district.

In the valley of the Rainy River, which comprises an area of about three-quarters of a million acres of good agricultural land, I have found that sections are still unoccupied; and in other sections, during the last fifteen years the development which might have been expected has not taken place, owing in some measure to the want of roads. The continuation, however, for a year or two of the work commenced in 1913 will remove this difficulty, and I am confident that settlers will go into this district in the future in greatly increased numbers, as the land is nearly all of good quality.

On my first visit to the Rainy River Valley, over twenty years ago, I found the conditions there almost similar to those in the Claybelt to-day. The character of the country, its soil, and its climatic conditions are almost identical. It is in the same latitude, and to-day in the Rainy River Valley where settlement has taken place, and large clearings made, all kinds of grains and vegetables are produced in abundance. Summer frosts are almost of the past.

In the districts of Nipissing, Sudbury, Algoma, Thunder Bay, and Kenora, the trunk roads as constructed or improved will make it possible for the settlers to reach markets for their produce at all seasons of the year. Other roads are required in these districts to make it possible for the settlers in the out-lying sections to reach the main trunk roads. Several of the trunk roads as graded last season still require to be surfaced in places with gravel or stone. It was found impossible in one season to complete many of the roads.

The mining roads constructed into the Kirkland Lake Goldfields and the West Shining Tree Goldfields will give to the miners in those sections an opportunity of developing the several mining prospects opened up; the road from Iroquois Falls Junction on the Temiskaming and Northern Ontario Railway to the pulp mills at Abitibi River will give to the settlers in that vicinity an opportunity of hauling their pulp timber and other produce to the mills.

Fair progress has been made by the settlers in the vicinity of Cochrane both east and west therefrom. Already settlement has reached a point about nine miles north of the Grand Trunk Pacific Railway in the valleys of the Abitibi and Frederickhouse Rivers. Quite a settlement has taken place in the vicinity of Hearst at the junction of the Algoma Central and the Grand Trunk Pacific Railways, not only on the lands of the Crown but on the railway lands of the Algoma Central Company. Twenty-nine miles of road were cut out and part graded in this section.

Work was commenced at Ground Hog River on the Grand Trunk Pacific Railway 50 miles west of Cochrane. A few miles of trunk road were cut out along the railway, where a considerable settlement has already been made. This is one of the most promising areas in the Claybelt. At this point there is a large section of country which was burnt years ago and is now easily cleared. Vegetables of all kinds have matured here at the headquarters of the railway contractors.

Trunk roads have been constructed west of Cochrane as far as the township of Kendrey, the lands of the New Ontario Development Company on the Matagami River. This company is making good progress. Approximately 400 acres have been chopped and burnt over, of which 300 acres have been logged and fairly well drained. The following plant and machinery has been installed: A large saw mill with a capacity of 60,000 ft. B.M. per day, six rossing machines with a capacity of 50 cords of pulp wood per day and a first-class planing mill.

Sixteen private dwelling-houses have been erected for employees and settlers and two large boarding-houses with accommodation for 100 men. A general store has also been built, together with a post-office and a schoolhouse, the latter being used also as a church. Upwards of ten miles of a fairly good type of colonization roads have been constructed by the company.

In the descriptions of the several roads hereinafter given, information will be found respecting the operations in the various districts.

Accompanying the report is a statement of expenditure in the different districts and of the number of miles of road constructed or under construction.

I have the honor to be,

Sir,

Your obedient servant,

J. F. WHITSON,

*Road Commissioner.*

## 2 Geo. V. Chap. 2.

STATEMENT OF EXPENDITURE ON ROAD CONSTRUCTION, AND MILEAGE  
CONSTRUCTED,

FROM 23RD MAY, 1912, TO 31ST OCTOBER, 1913.

## 1912.

## 1913.

Total number of miles of new  
road cut out in 1912..... 210 miles  
(Of which were graded, 39  
miles.)  
Old road improved ..... 23 miles  
Total number of miles of road  
under construction, 1912... 233 miles

New and old roads graded in  
1913 . . . . . 500 miles  
New and old roads partially  
graded . . . . . 40 miles  
New bush roads cut out ready  
for grading and old roads  
improved . . . . . 224 miles

Total number of miles of road  
under construction, 1913... 764 miles

In 1912 the total expenditure was along the Temiskaming and Northern Ontario Railway and branches; and along the Grand Trunk Pacific Railway, in the Districts of Temiskaming and Sudbury.

In 1913 the work was spread over all Northern Ontario, from the Quebec Boundary to the Manitoba Boundary; in the Districts of Nipissing, Temiskaming, Sudbury, Algoma, Thunder Bay, Kenora and Rainy River.

District.	Expendi- ture to 31st Oct., 1912.	Expenditure to 31st - Oct., 1913.	Mileage constructed and under construc- tion 1913.	Number of miles of bush road cut out.
District of Nipissing, North Bay to Mattawa .....		83,313 38	48	4
District of Temiskaming, Haileybury to Englehart, Matheson, Charlton, Swas- tika .....		185,612 61	150	50
District of Temiskaming, Cochrane, Porcupine, Iroquois Falls & Trans. Ry. from Quebec Boundary west 125 miles to Ground Hog .....	182,523 93	230,704 37	190	138
District of Sudbury, vicinity of the Town of Sudbury and West Shining Tree Mining District .....		118,568 32	72½	19
District of Algoma, vicinity of Hearst along G. T. P. Ry. and Junction of Algoma Central .....	3,866 71	18,529 61	29	29
District of Algoma, between Blind River and Sault Ste. Marie, on Sudbury & Sault Ste. Marie Rd. ....		76,275 40	35	.....
Thunder Bay, tributary to Port Arthur and Fort William .....		123,247 31	107	4
District of Kenora, vicinity of Kenora & Keewatin & N. W. ....		95,533 58	23½	12
District of Rainy River, in Rainy River Valley .....		135,031 31	109	23
General Administration Expenses .....	6,692 16	14,356 39	.....	.....
	\$193,082 80	\$1,081,172 28	764	279

## Summary of Expenditure:—

1912 . . . . . \$193,082 80  
1913 . . . . . 1,081,172 28

Total Expenditure . . . . . \$1,274,255 08

J. F. WHITSON,  
Road Commissioner.

ARTHUR E. D. BRUCE,  
Secretary and Accountant.



ROADS IN RAINY RIVER VALLEY, DISTRICT OF RAINY  
RIVER, CONSTRUCTED IN 1913.

Number of miles of roads constructed or improved and regraded.....	109
Number of miles of ditches constructed .....	32½
Number of miles of tap or offtake drains constructed .....	9¼
Number of miles of road resurfaced with gravel .....	30
Number of wooden culverts constructed .....	202
Number of pile bridges constructed .....	12
Amount expended during 1913 .....	\$135,031 31



The beautiful banks of the Rainy River, west of Pinewood.

A trunk road was commenced at the town of Fort Frances opposite the site of the Hudson Bay Company's old post and continued westerly for 60 miles through the valley of Rainy River to near the town of Rainy River, where the Canadian Northern Railway crosses said river into the State of Minnesota, passing through the villages of Crozier, Lavalee, Devlin, Emo, Barwick, Stratton, Pinewood and Sleemen to Rainy River, crossing Indian Reserves Nos. 11, 12, and 13 at the Manitou and Long Sault Rapids. The road follows the best possible grades where it could be constructed at the least possible cost and at the same time where it would serve the greatest number of settlers.

The country passed through can be described in a general way as a first-class

agricultural section, the soil chiefly clay and clay loam, level or gently rolling with few rock outcrops. Here and there muskegs are met with or large tamarac swamps but all of them can with a reasonable amount of expenditure be drained and made good farm lands. Most of the valuable timber has in the last twenty-five years been cut off, either for railway ties, telegraph poles, piling or saw logs, in the townships within twelve miles of the Rainy River. Here and there an occasional farm is still well timbered, and in every instance there is sufficient timber left for fuel and for building purposes for the settlers for many years to come.

In 1897 and again in 1909 two very destructive fires swept over parts of the valley. The first fire crossed the river from Minnesota, near Stratton, and almost completely destroyed the timber on several townships in that locality. Later on, in 1909, a similar fire crossed the river from Beaudet and Spooner, on the American



Shevelin & Clarke's Saw Mills at Fort Frances. Capacity, 750,000 feet per day.

side, entering Ontario at the town of Rainy River and swept in a northerly and north-easterly direction over a very large area. Much of the country swept over by these two fires was left in a condition almost ready for the plough. The deep muskegs, before these fires occurred gave to the country the appearance that it would never be suitable for agricultural purposes; these swamp lands, owing to the burning of the muskeg, have had an opportunity of draining, and are now some of the best farming lands in the valley. Almost every lot along the Trunk Road between Fort Frances and Rainy River has been located. Large clearings have been made in many instances and first class buildings constructed, the country has every appearance of being a prosperous agricultural settlement.

These remarks apply to the townships fronting on the river and adjacent to the line of the Canadian Northern Railway. About twelve miles inland, however, from the river, the conditions are somewhat different, owing, to some extent at least, to the want of good roads. Large clearings and well cultivated farms are not very frequently met with in this section, notwithstanding the fact that the land



is of a first-class quality. A continuation for a few years of the work commenced last season will remove all difficulties in the matter of roads, and I am confident that settlers will go into this district in the future in greatly increased numbers.

During last season a trunk road was constructed from Lavallee on the Main Trunk Road south to Rainy River, a distance of six miles. From the town of Emo a trunk road was constructed north a distance of five miles, and from the town of Barwick a Trunk Road was constructed north six miles. From Pinewood a road was constructed north four miles, and from Sleeman a main trunk road was constructed from the railway to the Little Grassy River, a distance of  $16\frac{3}{4}$  miles. This last mentioned road opens up a large section of first-class farming country in which fair progress has been made by the settlers. Several short roads were constructed in different places throughout the valley, where the settlers were



Shevelin & Clarke's Lumber Yard, Fort Frances. Quantity, 100,000,000 feet in December, 1913.

in most need of an outlet. All of these north and south trunk roads when extended further north will open up new sections and give to the present settlers a means of reaching a market on the Canadian Northern Railway which they have been long in need of.

Nearly all these roads have been well graded and ditched; thirty miles have been surfaced with gravel, 202 substantial wooden culverts of cedar and tamarac have been constructed and twelve pile bridges of the most durable material built;  $9\frac{1}{2}$  miles of tap drains had to be constructed in order to get the water away from the roads;  $32\frac{1}{2}$  miles of road ditches were dug of sufficient size to not only drain the road bed, but to assist the settlers in draining their lands, old roads where they were found too narrow were widened and reditched.

Following is a description of the various roads, on which was expended \$135,031.31.



## DESCRIPTION OF ROADS CONSTRUCTED.

## ROAD BETWEEN FORT FRANCES AND RAINY RIVER.

Road between town of Fort Frances and the town of Rainy River, commencing at the western boundary of the town of Fort Frances in Section 30, township of McIrvine, thence westerly along the old River Road 1,640 feet. From here a new road was built, running west 6,575 feet to the east boundary of Section 24, Township of Crozier; thence south 900 feet to the north-east corner of Section 13, Crozier; thence west 3 miles on old road along the north boundary of sections 13, 14 and 15, thence north one mile to the north-east corner of section 21; thence west 7 miles to the north-east corner of section 20, Township



Mr. Crawford's New Barn, north of Emo, Township of Carpenter. Concrete foundation; length, 106 ft.

of Devlin; thence north one mile to the north-east corner of section 29, Township of Devlin; thence west 7 miles to the north-east corner of section 30, Township of Lash; thence south half a mile to the village of Emo. This road has all been graded and well ditched from Fort Frances to Emo. Between these towns,  $3\frac{1}{2}$  miles of new road were cut out, graded and ditched. The remainder followed the old road which in many places was so narrow that two teams could barely pass. These ditches had to be reconstructed.

Along this road twelve and a half miles of ditches and two and a half miles of tap drain were dug. Fifty-four culverts and a pile bridge sixty-one feet in length across the La Vallee River at La Vallee, were built. Seven and a quarter miles of this road were surfaced with gravel. The remainder of the gravelling was left to be completed after the freeze-up when the work could be done at less cost, as the roads in the fall were very wet and would cut up badly

if heavy loads were drawn on them. Eleven miles of this road still requires in places gravel, to make a first class road between Fort Frances and Emo.

This road passes through a fine farming district, the soil being principally clay or clay loam with a few spruce swamps, all of the land has been taken up by settlers, most of whom have good buildings erected. One mile west of Fort Frances commences a swamp running along the trunk road a distance of two miles. This is the only large swamp passed over until within three and a half miles of Emo where the road again crosses a swamp for two miles. In both of these swamps there is good drainage.

The timber is small, practically all suitable for lumber having been cut or burnt off by the fires which have overrun the country. The timber found is mainly spruce, tamarac, poplar, birch and balm of gilead.



The Banks of the Rainy River between Emo and Barwick.

The next section of the trunk road is between Emo and the town of Rainy River, a distance of thirty-eight miles, described as follows:

Commencing at the Village of Emo, thence north-westerly to the east boundary of section 36 in the Township of Barwick, one mile; thence westerly along an old colonization road to east boundary of Indian Reserve number 11, one mile and 14 chains, thence almost in a direct line across the Indian Reserve through a beautiful farming country badly burnt over in places, a distance of three and a quarter miles to west boundary of said Indian Reserve, then N. 77, 20 W. 33.36 chains, then N. 65 49 W. 6.39 chains thence westerly along north boundary of river lot 38 31.09 chains thence westerly along the north boundary of section 31 Township of Barwick, one mile to Barwick Station on the Canadian Northern Railway and close to the village of Barwick, thence continuing westerly along south boundary of sections 1 and 2, Township of Shenston 2 miles, thence north



along east boundary of section 3, 2,871 feet to the southern limit of said railway, thence westerly along said railway 5 miles and 426 feet across Indian Reserves 12 and 13. Both these Indian Reserves have been almost entirely swept by the forest fire of 1897. The greater portion of Number 12 and the eastern and southern portions of number 13 is fine agricultural land. In the western portion there is a large muskeg which will require considerable draining. After crossing the Indian Reserve, the road then follows along the northern boundary of sections 12 and 11, township of Morley for one mile, 1,498 feet; thence northerly along east boundary of sections 15 and 22, 2 miles, passing through the town of Stratton and crossing the Canadian Northern Railway to the north side, half a mile north of the south-east angle of section 15. The road then turns west for five miles along the north boundary of sections 22, 21, 20, 19 and 18, thence



Surfacing a Semi-Muskeg Road with Gravel. Part of the Little Grassy River Road, Rainy River Valley.

northerly 2,600 feet along east boundary of section 26, Township of Dilke thence westerly along old colonization road 5 miles, passing through the village of Pine-wood; thence northerly 2,600 feet along east boundary of section 36, township of Worthington, thence westerly along the north boundary of the townships of Worthington and Atwood a distance of 9 miles to the town of Rainy River.

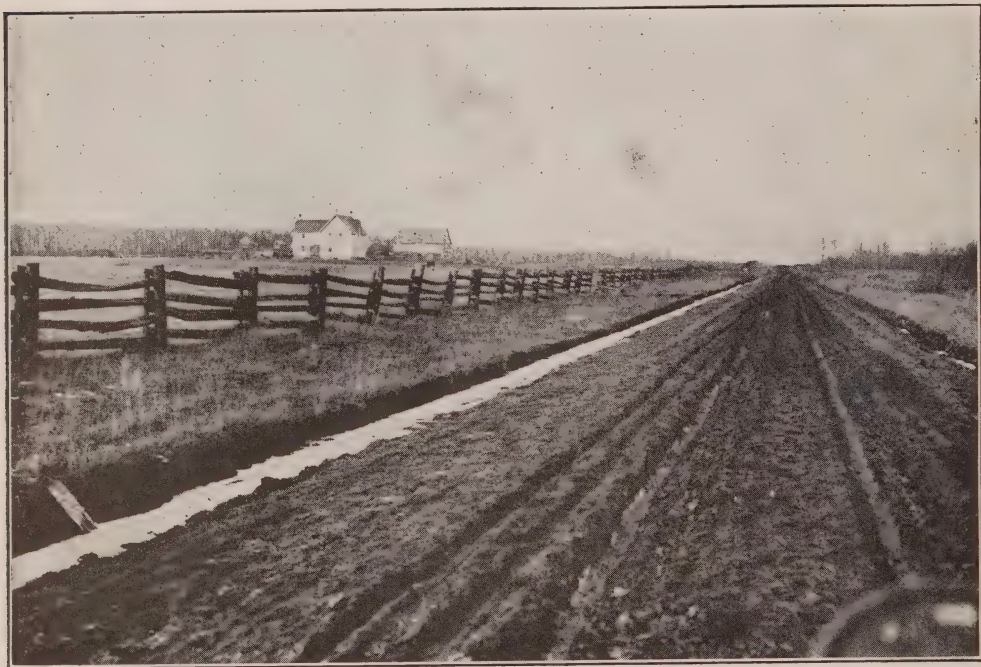
Along this road 16 miles of new road were cut out, 13 miles of which were graded, leaving 3 miles of new road to be graded next season, also 5 miles of old road should be graded next season before being gravelled. Sixty-two culverts and seven pile bridges were built, two and a quarter miles of tap drain were dug and seven miles of the road gravelled. Twenty-five miles of this road should



be gravelled to give a continuous gravelled road from Emo to Rainy River. The most of this gravel will have to be hauled by train as there are only a few good gravel pits close to this road. Twenty-five miles of this road was graded and three and a half miles cleared ready for grading, during the present season.

This road runs through a fine belt of clay land from Emo to Stratton. Between Stratton and Rainy River the road crosses six miles of swampy land, the remaining thirteen miles being good clay land. The high land has all been taken up and considerable of it cultivated.

Between Barwick and Stratton the road is all graded two miles of which were gravelled, the remainder being ready for gravelling. Between Stratton and Pinewood there remains one and one-half miles of new road to be ditched and two miles of old road to be graded before this road is ready for gravelling.



On the Fort Frances and Rainy River Trunk Road, near Stratton, before surfacing with gravel.

Between Pinewood and Sleeman there remains one and one-half miles of new road to be graded. Two and a half miles of gravelling will complete this road. Between Sleeman and Rainy River two miles of old road should be graded and four miles gravelled.

#### ROAD FROM SLEEMAN TO LITTLE GRASSY RIVER.

This road has a total length of sixteen and three-quarter miles, described as follows:

Commencing at the trunk road at the village of Sleeman thence northerly a distance of seven miles to the north-east corner of section 34 in the township of Blue thence diagonally across lots 5 and 6, Con. 1, township of Pratt to the north-east corner of lot 5, Con. 1, one mile and 1,109 feet, thence north 5 miles between lots 4 and 5 to the north boundary of the township of Pratt, thence

easterly one mile to the north-east corner of lot 3, township of Pratt, thence northerly two miles and 2,491 feet between lots 2 and 3, township of McCrossen to the bridge across the Little Grassy River.

On this road 17 miles of ditches and one mile and 600 feet of tap drain were dug, 32 culverts and two bridges were built, 10 miles of road gravelled and Sleeman's Creek cleaned out for one mile to give a good outlet to the water from the ditches. The road was graded its entire length. Four miles of this road is new road.

For the first twelve miles along this road fifty per cent. of the land is low, beyond the twelve miles the road passes through a fine belt of clay land where previous to the building of this road the settlers only had a winter road to the railway.

The large timber has nearly all been cut, but considerable cedar posts and poles are taken out each winter by the settlers. The principal timber found are the poplar, cedar, birch, tamarac and spruce. Most of these trees are of small size but there still remains a considerable quantity of good cedar and large poplar.



The Fort Frances Water Power on Rainy River, showing the Ontario and Minnesota Power Company's Power Houses and Pulp and Paper Mill on the Ontario side of the river.

#### ROAD IN THE TOWNSHIP OF DILKE.

One-half mile of road was graded and gravelled south from the trunk road between river lots 24 and 25. This road was built to enable us to haul gravel to the trunk road. It passes through a good farming district.

#### NORTH PINWOOD ROAD IN THE TOWNSHIP OF NELLES.

This road is a continuation of the road running north from the village of Pinewood. Commencing at the north-east corner of section 3, township of Nelles, thence north four miles to the north-east corner of section 26, Nelles.

Along the east boundary of section 3 and 10 a single ditch was dug alongside of old road and the excavation spread to grade on the old road bed. On the east 10 L.M.



boundary of section 15, eighteen hundred feet of new road, one culvert and a pile bridge 46 feet in length were built. On the east boundary of section 22 one mile of new road was built. On the east boundary of section 27 one mile of single ditch was dug and the road grubbed and cleared. On this mile another ditch should be dug on the opposite side of this road. The total length of this road is 4 miles and it was built with the intention of continuing it to the Big Grassy River country.

Land along this road is mostly swampy; all of the high land has been settled on, and the settlers have been very much handicapped by poor roads. This road will open up a good country to the north if continued. The timber found is small spruce, tamarac, poplar and birch.



A Group of School Children and Teacher in the Rainy River Valley.

#### BARWICK ROAD NORTH ALONG SHENSTON AND DOBIE TOWN LINE.

Commencing at the south-east corner of the township of Shenston, thence northerly 6 miles along the town line.

This road was graded its entire length. Five culverts and 1,095 feet of tap drain were built. This road passes through an excellent farming district, well settled.

#### ROAD ON NORTH BOUNDARY OF TOWNSHIP OF TAIT.

Commencing at the north-east corner of section 35, township of Tait, thence westerly along the north boundary of this township, two and one-quarter miles. This road has been cleared and grubbed but not graded.

#### ROAD IN TOWNSHIP OF SHENSTON.

Commencing at the south-east corner of section 2, township of Shenston, thence northerly a distance of 2,858 feet along east boundary of section 2. This



road was gravelled its entire length and one culvert built. It was made for hauling gravel to the trunk road. It passes through good farming country.

#### CARPENTER AND DOBIE TOWN LINE.

Commencing at the trunk road on the townline between Barwick and Lash, thence northerly 5 miles along the townline between Barwick and Lash and along the Carpenter and Dobie townline.

Along this road 3,310 feet of tap drain were dug, 17 culverts and one bridge 33 feet in length were built. The road was graded its entire length. This road passes through a good farming district. The soil is clay or clay loam. The land is all taken up and improved.

#### CROZIER AND DEVLIN TOWN LINE.

Commencing at the north-east corner of section 24 in the township of Devlin, thence northerly along the Crozier and Devlin townline one mile and a half.

The road was graded one mile north from the trunk road the remaining half mile being cleared and grubbed ready for grading. Two culverts and 600 feet of tap drain were built.

This is a new road and gives an outlet to a number of settlers who did not have a road before to town. The soil is a heavy clay. All of the land along this road is settled.

#### DEVLIN ROAD, TOWNSHIP OF BURRISS AND DANCE.

Commencing on road between lots 8 and 9, township of Burriss 2,400 feet south of the north boundary of Burriss, thence northerly 2,400 feet between said lots, thence northerly two miles between lots 8 and 9 township of Dance. There was also a road built running easterly along the north boundary of lots 8 and 7, Con. 6, Burriss one mile.

Between lots 8 and 9 Burriss, 2,400 feet of old road was grubbed and graded. Between lots 8 and 9 concessions 1 and 2 Dance, a new road was cleared two miles. In Con. 1 three-quarters of a mile of road was graded and the grubbing completed to the end of the mile. Six culverts and 3,080 feet of tap drain were built. Along the north boundary of lots 8 and 7 Burriss one mile of road was cleared 66 feet in width and 1,230 feet of road graded.

This road should be completely graded next season and the road continued north another two miles to give an outlet to the settlers located there.

The land is clay and spruce swamp and is all settled on and partly cleared and cultivated.

#### LA VALLEE ROAD.

Commencing at the Canadian Northern Railway track at the village of La Vallee thence southerly five and a half miles to the old river road thence easterly along said road a distance of three miles.

Six miles of this road was practically new road the remainder being old road which we regraded. This road has been graded its entire length, but the new road should be gone over next season with the grader to smooth it down as the grade was wet when built and it was impossible then to make a smooth road. 22 culverts and 9,700 feet of tap drain were built on this road.

This road passes through a fine belt of clay land and is all settled and considerable of it under cultivation. The timber found is small being chiefly spruce, tamarac, birch and poplar.

#### CROZIER ROAD.

Commencing at the trunk road on the east boundary of section 20, township of Crozier, thence south 1,000 feet to the Canadian Northern Railway.

This road was graded, one culvert repaired, and 300 feet of tap drain dug.

#### ROAD IN TOWNSHIP OF CROZIER.

Commencing at the trunk road at the north-east corner of section 21, township of Crozier thence one mile easterly on the north boundary of section 22.

This road was cleared the full width of 66 feet. The country is swampy; the first quarter of a mile is good clay land.

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### ROADS CONSTRUCTED IN THE PORT ARTHUR DISTRICT, TRIBUTARY TO THE CITIES OF PORT ARTHUR AND FORT WILLIAM, DURING THE SEASON OF 1913.

Amount expended, \$123,247.31.

Number of miles of road cut out and old roads improved and graded, 107.

The following roads were cut out, improved and graded during the season of 1913:

#### DAWSON ROAD.

Commencing at the north-westerly limit of the city of Port Arthur thence north-westerly 18 miles to the crossing by the Grand Trunk Pacific and the Canadian Pacific Railways near the Kaministiquia River.

#### DOG LAKE ROAD.

Commencing at a point on the Dawson Road about four miles west of the limit of the city of Port Arthur, thence northerly toward Dog Lake. Work was completed on this road four miles.

#### JOHN STREET ROAD.

Commencing at the westerly limit of Port Arthur, thence west to the Kaministiquia River a distance of  $14\frac{1}{2}$  miles. The last half mile of this road was not completed as the crossing point on the Kaministiquia River has not yet been decided upon.

#### OLIVER ROAD.

Commencing on the westerly limit of Port Arthur thence west 17 miles to the Kakabeka Falls, together with a diversion of  $1\frac{1}{2}$  miles to the dam across the same river.

## OLIVER AND MCINTYRE TOWNSHIP ROAD.

Commencing at the Oliver Road and extending north between townships of Oliver and McIntyre 6 miles.

## ARTHUR STREET ROAD.

Commencing at the west limit of the city of Fort William thence west to Kakabeka Falls, together with a branch road running south-westerly crossing the Kaministiquia River at the village of Stanley and proceeding south-westerly along the White Fish River Valley to Hymers, a distance of 21 miles in all. The work performed consisted in widening, clearing, grading and placing culverts.



On the Old Dawson Road, ten miles west of Port Arthur, showing 40 years' growth of White Birch.

## PIGEON RIVER ROAD.

Commencing at the southerly limit of Fort William, thence south-westerly to and following the Slate River Valley, passing the front of the Prison Farm and southerly towards the International Boundary, at a point on the Pigeon River where a trunk road now being constructed in the State of Minnesota will also end. The work was performed on this road for a distance of 20 miles.



## SCOBLE AND PEARSON ROAD.

Commencing at a point on the Pigeon River road where the latter turns south from the north limit of the township of Blake, thence west along the north limit of that township and south along the west limit of the said township, to a trunk road constructed by the municipality of Pearson township, and beginning again at a point on said trunk road where the line between lots 6 and 7 intersects it; thence south 2 miles; thence west 1 mile to another trunk road similarly constructed. Work was performed on these roads for a total distance of 6 miles.

On all the old roads improved, the stumps, etc., were cleared away and burned for a width of 66 feet, all boulders and stones, stumps and roots were removed from the central 40 feet, culverts of corrugated iron, stone or durable



The Fort William and Duluth Trunk Road passing the Provincial Government's Prison Farm, south-west of Fort William.

wood were built at all stream or water course crossings. The steep pitches and grades were modified by excavation. All low-lying portions of the roadway were built up by borrowing earth from the sides or from adjacent high ground. A roadway 28 feet in width having well constructed ditches on each margin was formed having a crown of 2 feet at its centre above the ditches. Graders hauled by horses and a large grader hauled by a traction engine were used in the work.

The old roads were often merely a waggon width track, closely hemmed in, in places by trees and undergrowth, with many roots, stumps and boulders in the roadways. They followed along the road allowances, but were very crooked and little or no work had been done to modify the steep pitches at stream crossings and hills. Drainage was insufficient, and in many instances the old ditches were so close to the travelled portion of the road that it was dangerous for vehicles to pass. These roads had to be widened, the old ditches filled in and new ones constructed. Gravel suitable for road purposes was difficult to procure.

## DAWSON ROAD.

The work was begun at the west limit of the city of Port Arthur. The road was cleared to the full width of 66 feet for the first ten miles then 40 feet in width the remaining  $7\frac{1}{2}$  miles to the Canadian Pacific Railway near the Kaministiquia River. All stumps, stones and debris were cleared from off the central 40 feet of the right of way. Wooden, stone and four corrugated iron culverts were built in place. The grading was completed for  $11\frac{1}{2}$  miles.

## OLIVER ROAD.

Cleared 66 feet in width for 17 miles to the falls, also a branch running to the dam site on the Kaministiquia River about  $1\frac{1}{2}$  miles. Stones, stumps, etc., removed from the central 40 feet. Wooden, stone and 45 corrugated iron culverts built in place. The grading and ditching completed for 18 miles.

## OLIVER AND MCINTYRE TOWN LINE.

Cleared 66 feet in width for 6 miles, and stones, stumps, etc., removed from the central 40 ft. Wooden and stone culverts built in place. Grading begun at John Street and completed south one mile, also begun at Dawson Road and completed south 2 miles. All ditching completed. Part of this road still requires to be graded.

## ARTHUR STREET ROAD.

Cleared 66 feet in width for 21 miles; stones, stumps, etc., removed from the central 40 feet, and wooden, stone and 18 corrugated iron culverts built in place. Grading completed to Kakabeka Falls and on the branch road across the Kaministiquia River at Stanley and south-westerly  $2\frac{1}{2}$  miles.  $18\frac{1}{2}$  miles of grading done. The entire road well ditched. A diversion of  $2\frac{1}{2}$  miles long from the former road south-west of Stanley was begun where grading ceased. This  $2\frac{1}{2}$  miles was cleared out, stumped, etc., and made fit for a winter road. The diversion was made in order to avoid a steep hill on the old road. This joins the former road again and follows the same for about  $1\frac{1}{2}$  miles. There a further diversion required to be made to a point on the former road near Hymers, thence it should run through the township of O'Connor.

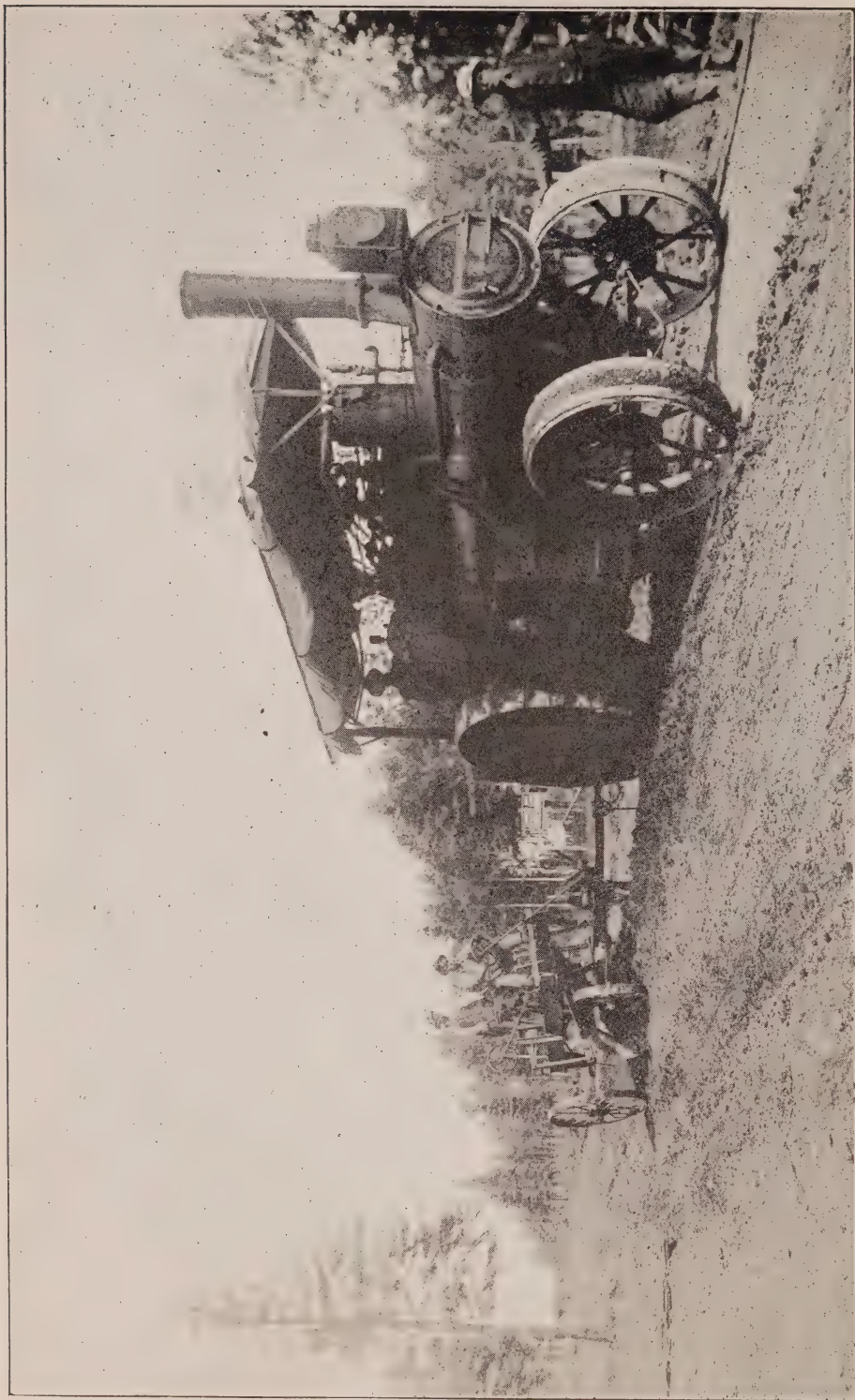
## PIGEON RIVER ROAD.

Cleared 66 feet in width for 20 miles, stones, stumps, etc., removed from the central 40 feet. Wooden, stone and 96 corrugated iron culverts built in place. Grading completed for 14 miles with the exception of 2 hill cuttings and one fill to be completed. Ditching completed for 14 miles. This road may be extended to the International boundary to connect with the state road from Duluth to the Pigeon River, which is now partially completed from Duluth to within a mile or two of the river.

## SCOBLE AND PEARSON ROAD.

Cleared 66 feet in width for 4 miles, stones, stumps, etc., removed from the central 40 feet, and stone and 41 corrugated iron culverts built in place. Grading completed for 4 miles with the exception of a fill 300 feet in length which has been cross-laid. This part of the road lies on the town line between





Grading on the Oliver Road, west of Port Arthur.



the township of Blake and Paipoonge one mile, and between the townships of Blake and Scoble three miles, connecting at its southerly end with a trunk road already constructed by the township of Pearson. Road between lots 6 and 7 township of Pearson cleared 66 feet in width for two miles, stones, stumps, etc., removed from central 40 feet. Wooden culverts and bridge over the Slate River built. Road made fit for winter travel. This part of the road begins at the above mentioned trunk road and runs south 2 miles thence west 1 mile to join a second trunk road constructed by the municipality. This road may be extended south along the line between lots 6 and 7 to join the Port Arthur Duluth International road.

#### DOG LAKE ROAD.

Work begun late in season, at Dawson road. Cleared 40 feet in width for 4 miles. Stones, stumps, etc., removed from central 25 feet of clearing for 4 miles. Wooden and stone culverts built in place for  $3\frac{1}{2}$  miles. Grading and ditching completed for  $2\frac{1}{2}$  miles. At a point about  $2\frac{1}{2}$  miles from the Dawson Road a diversion of the former road was begun and was laid out for  $2\frac{1}{2}$  miles when it again joined the former road. This was cleared and stumped and made fit for a winter road but was not graded nor completely ditched.

#### JOHN STREET ROAD.

Cleared 66 feet in width for  $13\frac{1}{2}$  miles. Stones, stumps, etc., removed from central 40 feet of the clearing. Wooden, stone and 9 corrugated iron culverts built in place. Grading and ditching completed for  $11\frac{1}{2}$  miles. Total length of road to the Kaministiquia River is about  $14\frac{1}{2}$  miles. The last mile of which should not be built until such time as the crossing point of the river has been decided upon, the road to be diverted to meet that.

Along the Dawson Road which was cut out as far back as 1870 the land is nearly all settled on and in places large clearings have been made. In other places, however, many poorly-cultivated farms are to be seen or land held by land speculators. In other places, owing to the rough and broken character of the country, only small clearings or garden patches are under cultivation. This class of land is to be found towards the Kaministiquia River. The land in many places is light, gravelly and stony. There are a good many Finlanders located along the road who appear to be making good progress, although on rough, broken land.

The same remarks will apply to the character of the land along the Dog Lake Road; good land in small patches here and there, but speaking generally, the country is rough and broken.

Along the John Street Road, Oliver Road and Arthur Street Road there are large areas of first class farming land under good cultivation. These lands have been settled on in places for many years.

Going south-west of Port Arthur in the Slate River Valley, you enter a fine farming country, under first class cultivation. Settlement as a whole will compare favorably with some of the best settlements in older Ontario. As you proceed south on the Pigeon River Road through the township of Blake and Crookes, the country becomes more broken and high mountains are passed, but in the valleys, however, the soil is first class, and after the completion of the road, it will all be occupied, as Fort William and Port Arthur offer splendid markets for all kinds of vegetables.

The same remarks will apply to the country on the Pearson and Scoble Roads.

## ROADS IN THE DISTRICT OF KENORA, IN THE VICINITY OF THE TOWNS OF KENORA AND KEEWATIN.

Number of miles of roads constructed or improved, 23½.

(Of which 4 miles were macadamized and 15 graded, and the balance, 4½ miles, cut out.)

Amount expended during the season of 1913, \$95,533.58.

Operations on the Kenora and Keewatin roads began early in May at the east branch of the Winnipeg River on the old road between the town of Kenora and the village of Keewatin, which road passes through the village of Norman. At a point on this road about half a mile east of the village of Keewatin a trunk road was constructed running north west, crossing Darlington Bay of the Lake of the Woods over the bridge constructed by the Colonization Road Branch of the Public Works Department in 1912. The road continues north-westerly, passing the north end of Middle Lake in the Township of Pellatt, thence continues in a westerly direction across the fourth concession of said township, crossing the west boundary of Pellatt about a quarter of a mile north of the southwest angle of Lot 16, Concession 5. The road then continues westerly and north-westerly for a distance of about 3¾ miles, passing along the east shore of Beulah Lake until it reaches the eastern end of Pelican Pouch Lake, where operations ceased; at a point about sixteen miles south-west of Malachi station on the Grand Trunk Pacific Railway and about the same distance east of the Manitoba boundary.

Besides this, a road was graded from Ignace Station to Osaquan Station on said railway, a distance of five miles. Beginning at Ignace, the first two miles of this road were through a muskeg, which had to be ditched and surfaced with cinders from the Canadian Pacific Railway round-house, to a depth of from eight to ten inches. Several culverts were put in and off-take ditches dug. The balance of the road was all cut out, stumped, and grading done where required. Several bad hills were cut down and graded, and 1,000 yards of corduroy laid, and covered with clay and gravel. Four small bridges were built of the following lengths, 100 feet, 6 feet, 15 feet and 40 feet. The traffic over this road is in connection with a stone quarry and a sawmill at Osaquan.

Besides the above road, one mile of road was cut out and fairly well graded at Minaki Station on the Grand Trunk Pacific Railway where it crosses the Winnipeg River, namely, Winnipeg Avenue and part of Front Street, Kenora Street and North Street. These roads connect Gun and Sandy Lakes with the Grand Trunk Pacific Railway Station. At the foot of Winnipeg Avenue on Sandy Lake, a dock eighty feet in length by sixteen feet in width was constructed.

Minaki is a town site laid out by the Department of Lands, Forests and Mines three years ago. Part of it has been disposed of, and it has now become a very prominent summer resort for the citizens of Winnipeg. Already the Grand Trunk Pacific Railway Company have commenced the construction of a large tourist hotel. Islands are numerous in the two lakes to the north and south of the railway, Sandy and Gun, and compare favorably with those of the Lake of the Woods.

The road as constructed between Kenora and Keewatin follows as closely as it was practicable to construct, the old road along the Canadian Pacific Railway, constructed nearly twenty years ago. The old road passed over a rough, broken and hilly country. From the east branch of the Winnipeg River west, very little work had been done on the road. No attempt had been made to cut down the grades or drain the low places. It was the most difficult and expensive piece of work I had

to construct this season, as rocky hills and steep pitches had to be cut down and the low places built up with rock. No gravel was available in the district and rock had to be crushed to surface the road with. The old road followed close to the bank of the Winnipeg River in places, or close to the right of way of the railway, where it was dangerous for teams to pass. Over 7,000 cubic yards of crushed rock was required on this road. The rock excavated from the hills was used in the road bed in the valleys.

The road between the two towns is now completed and will compare favorably with the best macadamized roads in any part of Northern Ontario. The distance from the east branch of the Winnipeg River on the Keewatin branch is 26-10 miles. At a point on this road about half a mile east of the Keewatin bridge, the trunk road branches to the north-west, crossing Darlington Bay on the long wooden bridge constructed last season by the Colonization Road Department. This bridge is over 600 ft. in length built on piles. From the Kenora and Keewatin Road to the bridge, a good portion of the road had to be built up with stone and surfaced with gravel, and crushed rock. North of the bridge through the Township of Pellatt the country was found very broken. The road winds through the valleys. In the rocky parts, road material, even soil was difficult to procure and had to be drawn a considerable distance. In other places, where the road passed through sections of good farming land, it was possible to use the grader. The road in places follows a Colonization Road cut out two years ago. This road was straightened and where practicable was changed in order to improve the grades. There is now a well graded road for a distance of nearly nine miles beyond the Darlington Bay bridge. There still remains  $5\frac{1}{2}$  miles of this road to be graded.

The country to the north and north-west of the towns of Kenora and Keewatin, through which the above road passes and extending west to the Manitoba boundary, and north to the Grand Trunk Pacific Railway, is generally rugged, hilly and rocky, and in part mountainous. Not more than one-fifth of it can ever be considered as fit for cultivation of any kind. The arable land occurs in small tracts varying from a few acres up to a hundred acres, but seldom exceeding a few thousand acres in extent; comprising nowhere any important or extensive field for colonization.

The country has at different times, in places, been swept by forest fires. There still remain, however, very considerable areas of Jack Pine, Spruce and Tamarac with scattering groves of Red and White Pine. Where the land is free from stone or rock, and except in the Jack Pine plains where the soil is very sandy and gravelly, the soil is a rich clay or clay loam; and vegetables, and all kinds of grain are being produced, and as there are good markets at the towns of Kenora and Keewatin, farming where carried on is very profitable. Heretofore the settler was seldom able to reach these markets except in the winter season when sleighing was good. With the road as now constructed, it will be possible for him to reach a market at all seasons of the year. Later on, this road, which is now within sixteen miles of the Grand Trunk Pacific Railway, might be extended, as all along the route, small scattered areas of fairly good land are met with. The road might also be extended west to the Manitoba boundary, a distance of about sixteen miles, if it is ever found practicable for the Manitoba Government to construct a trunk road east from Winnipeg north of the Canadian Pacific Railway to the Lake of the Woods, one of the finest tourist resorts in the west.



DESCRIPTION OF TRUNK ROAD CONSTRUCTED BETWEEN TOWNS  
OF NORTH BAY AND MATTAWA, DISTRICT OF NIPISSING,  
DURING SEASON OF 1913.

Number of miles of road constructed and graded .....	48
Number of corrugated iron culverts placed .....	36
Number of miles of road resurfaced with gravel .....	20
Amount expended .....	\$83,313.38

This road commences at the Town of North Bay where Kennedy Avenue intersects the boundary between the Townships of Widdifield and Ferris; thence southerly along Kennedy Avenue and the southerly production thereof, close to the shore of Lake Nipissing to line between Concessions 14 and 15 of the Township of Ferris; thence in an easterly direction across Concession 14 to near the Grand Trunk Railway; thence southerly along the west side of the Grand Trunk Railway to the Village of Callander in the Township of Himsworth, a distance of seven and one-half miles; thence easterly between the 8th and 9th Concessions to the Township of Himsworth and Ferris to the side line between Lots 9 and 10, Ferris; thence southerly across the 8th and 7th Concessions of the said last mentioned township, to the road between Concessions 6 and 7; thence easterly across Lots 9 to 5 inclusive, crossing Canadian Pacific Railway on Lot 5; thence southerly and south-easterly along the north shore of Nasbonsing Lake, north of the right of way of the Canadian Pacific Railway, passing through Nasbonsing Station, and entering the Township of Bonfield, and crossing to the south of the Canadian Pacific Railway at the outlet of Nasbonsing Lake into the Town of Bonfield; thence northerly through said town to the line between Concessions 8 and 9, township of Bonfield; thence continuing easterly along said Concession line across Lots 10 to 32, inclusive; thence southerly between Lots 32 and 33, across Concessions 8 and 7, Township of Bonfield; thence easterly between Concessions 6 and 7, across Lots 33, 34 and 35, to the townline between Bonfield and Calvin; thence southerly along said townline across Concessions 8, 7 and 6, Township of Calvin; thence east between Concessions 5 and 6, in the said last named township, across Lots 36 to 33 inclusive; thence southerly between Lots 33 and 32, across Concession 5; thence easterly between Concessions 4 and 5, across Lots 32 to 1, inclusive, to the Township of Papineau; thence easterly crossing the right of way of the Canadian Pacific Railway on Lot 33, Concession 13, near Calvin Station; thence continuing in a north-easterly direction across the 13th and 14th Concessions of the said Township of Papineau to the line between Concessions 14 and 15 on Lot 22, north of Earl's Lake; thence continuing easterly along the line between Concessions 14 and 15 across Lots 22 and 21, and still continuing in an easterly direction across the 14th Concession, to the side road between Lots 15 and 16, where the road passes close to the right of way of the Canadian Pacific Railway; thence continuing easterly along the north side of the said railway to Mattawa Station, on the said railway, a distance of forty-eight miles.

Construction work on this road was begun early in May, 1913, from both ends. Commenceing at Mattawa, the road followed the old travelled colonization road, built many years ago, first for lumbering purposes and later on improved in places by the Public Works Department for colonization purposes. This road passes through a portion of the Township of Papineau, in which there is little or no agricultural land. The country is almost one continuous bed of boulders, small and large, with coarse gravel. The old road was in most places not more than 8 or 10 feet wide and in many places only the width of a waggon. I removed all the boulders from off the road for a width of from 18 to 22 feet and dug sufficient

ditches to carry off the surface water, and graded the road, cutting down all the bad hills and steep pitches and straightened the road from point to point. As good gravel was to be found in great quantities close to the road, the entire road was gravelled for a width of from 12 to 16 feet and to a depth of from 5 to 8 inches. Good stone culverts were placed wherever required.

As we entered the Township of Calvin on the east side fairly good agricultural land was met with, although stony in places. The country is all well settled and fair progress is being made. This road crosses the Pautois Creek on Lot 7 and the Amable du Fond River on Lot 21. There is a good concrete bridge across Pautois Creek but the bridge across the Amable du Fond River is a wooden one and has been in use for ten or more years and will shortly require to be removed. The covering is badly rotted and I re-planked it, and it will now last for a few years. The bridge is 120 feet in length. It is built on piers filled with rock. The piers are badly decayed and at present it would be unsafe to take heavy machinery over it. On Lot 26 a small bridge was constructed with two corrugated iron culverts 58 inches in diameter. The country along the road through the Township of Calvin is high and rolling. Large stone culverts were constructed where necessary and the road well graded and ditched. Several corrugated iron culverts were placed where stone could not be had conveniently. About three miles of the road was gravelled in places where it was most required. The road throughout this township is now in first class condition, from 18 to 22 feet in width. The low places were all built up with stone and the heavy grades cut down.

Entering the Township of Bonfield on the east, the land still continues good. The road crosses the Canadian Pacific Railway at the north-east angle of Lot 32, Concession 8, at the Village of Rutherglen to the north side, and again re-crosses to the south side on the same lot. On Lot 31 it crosses Spark's Creek where a concrete bridge was constructed by the Department of Public Works. Large corrugated iron culverts were used for the bridge on the creek crossing Lot 24, on the line between Concessions 8 and 9. Several small muskegs were crossed and these had to be filled in with stone and well drained. Numerous rocky hills were crossed and considerable rock cutting had to be done in order to make the grades passable. The country approaching Bonfield Station was exceptionally broken and required a great deal of work to make the road in good condition. On this part of the road corrugated iron culverts were placed on all the small streams. In the Town of Bonfield, across the Kabaskong River, a steel bridge with concrete abutments was constructed a year ago by the Public Works Department. The western approach to the bridge at the crossing of the Canadian Pacific Railway had not been filled in. Since October 31st I completed this part of the work, filling in over 1,500 cubic yards of rock.

After crossing the Kabaskong River, the road continues along the north side of the Canadian Pacific Railway, and at a distance of  $2\frac{1}{2}$  miles the Township of Ferris is entered, the road still continuing from a chain to a quarter of a mile from the right of way of the Canadian Pacific Railway, passing close to Nasbonsing Station on Lot 3, Concession 3, Ferris. The country still continues rocky and rolling although there is a fair percentage of fairly good agricultural land in places. The road crosses the Canadian Pacific Railway on the line between Concessions 6 and 7, on Lot 5, and follows the Concession road allowances and side road allowances throughout to the Village of Callander. From this crossing to Callander, forty stone and wooden culverts were constructed across the numerous small streams and runways. Throughout this entire township the country is

broken and rocky, although several first-class farms along the road were passed. Large numbers of boulders had to be drawn off the road and rocky ridges cut down. The road is now well graded and ditched although very little gravel was available, and later on it will be necessary to put gravel on the lower portions.

About three-quarters of a mile east of Callander the road crosses the Canadian Northern Railway and at Callander it crosses the Grand Trunk Railway to the west side and then continues northerly paralleling the railway until it reaches a point about a quarter of a mile south of Nipissing Junction, at the crossing of the Canadian Pacific Railway. Up to this point from Mattawa the road follows as nearly as possible the old road. It enters the Township of Himsworth half a mile east of Callander and continues across Concessions 27 and 28, Himsworth, when it again enters the Township of Ferris between Lots 31 and 32, and from that point it continues through the Township of Ferris until it crosses the boundary between Ferris and Widdifield on Lot 40, Concession 18. From near Nipissing Junction the new road was cut out, the old road being found almost impracticable owing to the rocky country passed through. The new road, as cut out, had no bad grades and passes through a country which has a fair percentage of agricultural land in it. It passes close to the shore of Lake Nipissing, passing close to a large number of summer resorts. From Nipissing Junction to North Bay the country is very level in places, the soil being light, sandy loam. No gravel was available and after the road had been well graded and ditched it was found necessary to crush rock so as to macadamize about four miles of it. This work was begun early in January when it was found cheapest to crush and haul rock. Between North Bay and Callander twenty first-class stone and wooden culverts were constructed and three wooden bridges.

This road was all constructed by day labor. The grader was used where it was found practicable but that covered only a very small portion of the entire road.

Eighty-three thousand three hundred and thirteen dollars and thirty-eight cents was expended on this road.

When the road between North Bay and Callander is stoned and the low places between Callander and Bonfield gravelled and a new bridge constructed across the Amable du Fond River, this road will be quite passable for automobiles or motor trucks. At present, the distance of forty-eight miles can be made in three hours.

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### ROADS IN THE DISTRICT OF SUDBURY.

Number of miles constructed and old roads improved, 72½.

(Of which 10 miles have been macadamized and 50 miles graded, 12½ miles cut out and partly graded.)

Amount expended, \$118,568.32.

Work on the Sudbury roads was commenced on or about the 1st of May, 1913, between the Town of Sudbury and the Murray mine which is distant 3½ miles west of Sudbury. A road had been constructed between these two points by the Colonization Road Branch some years ago. It passed through a very rocky and broken country, interspersed with several small muskegs which were difficult to drain. There was a good deal of traffic passing over this road between Murray mine and Sudbury, and also that of all the settlers in the Chelmsford Valley for twenty miles west, as far as Onaping on the west and north-west, Vermilion Lake on the south and Vermilion River on the north. It was therefore considered



necessary to construct a trunk road sufficient for the heavy traffic and farm produce that would be taken over it. The road was constructed as near as practicable to the stations along the Canadian Pacific Railway, through the Village at Murray mine, Azilda, as close to the Village of Chelmsford as possible, through the Village of Larchwood and west to Phelan.

Between Sudbury and a point a mile west of Murray Mine, the country is a series of rocky ridges and small inuskegs. On the old road little had been done to modify the grades, and it was found necessary to do a great deal of rock cutting and filling in of the hollows in order to make a grade that was in keeping with the amount of traffic which would pass over the road. No gravel was available along the road.



The Sudbury and Murray Mine Stone Road.

A stone crusher was put to work along the road, also crushed rock was brought in by train from the Moose Mountain Mine, north of Sudbury. It required 5,000 tons of crushed rock to surface the road to a point about a mile beyond Murray Mine. Beyond this point the road passed through a section of country less broken, as far as Azilda Station on Lot 4, Concession 1, Township of Rayside, where the Chelmsford Valley, a large section of good agricultural country, is entered. The road then continues west and north-west within 5 to 15 chains of the right of way of the Canadian Pacific Railway to the line between Concessions 2 and 3, Lot 8, Rayside, thence west along said concession line across Lots 8, 9, 10 and 11, to the townline between the Townships of Rayside and Balfour; thence north 15 chains to the line between Concessions 2 and 3 of said Township of Balfour, thence west along the line between said Concessions to line between Lots 10 and 11, 5 miles; thence north and north-west crossing the Canadian Pacific Railway near the line between Lots 11 and 12; thence westerly

north of the right of way of said railway, crossing the Vermilion River and passing through the Village of Larchwood on the townline between the Townships of Balfour and Dowling; and still continuing westerly to the line between Concessions 3 and 4, Township of Dowling, thence west along said Concession line, across Lots 2, 3, and 4, thence south between Lots 4 and 5 to the Canadian Pacific Railway, in all a distance of 21 miles from Sudbury.

From Azilda west and north, the land is in most instances clay or clay loam, and in places sandy loam, fairly level, with that class of land extending for miles to the north and south of the road. A large portion of the country is cleared and under cultivation. All the good agricultural land has been settled upon, and fair sized clearings made. In many instances large clearings, with first-class buildings, are met with throughout this valley.



Sudbury and Murray Mine Stone Road passing under the Algoma Eastern Railway.

#### *Azilda Trunk Road:*

From a point on the Sudbury and Murray Mine Road half a mile east of Azilda Station, a road was constructed north into the Blezard Valley between Lots 2 and 3, Township of Rayside, across Concessions 1 to 5, inclusive, a distance of  $4\frac{3}{4}$  miles, to the line between Concessions 5 and 6, Township of Rayside: thence west between the said Concessions one mile, and east four miles to the line between Lots 7 and 8, Township of Blezard. This road was well ditched and graded. It passes through a first-class agricultural country; and gives to the settlers a good outlet to the markets at Murray Mine, Copper Cliff or Sudbury. It was intended to have extended this road further north for four miles to the Vermilion River, as the country still continues good and well settled. But owing to the lateness of the season, it was found impossible to continue the work.



From a point on the Sudbury and Murray Mine trunk road about one mile west of Murray Mine towards Larchwood on the trunk road, part of the road should be surfaced with stone or gravel. In places the soil is a heavy clay, and in the wet seasons it will be difficult for heavy traffic to pass over it. The road, however, has been well ditched and graded, the grades modified, the road widened and good substantial culverts constructed where required.

*Sudbury and Blezard Valley Trunk Road:*

From a point about two miles north of Sudbury, a trunk road was constructed northerly into the Blezard Valley, which is a continuation of the Chelmsford Valley above mentioned. The work began on the line between Lots 4 and 5, Concession



Sudbury, Murray Mines and Chelmsford Stone Road, between Sudbury and Murray Mines.

6, McKim, and continued northerly, passing the Stobie Mine, Mount Nickel Mine and Blezard Mine. For the first six miles, the road passes through a country which is broken in places, with rocky ridges which required a good deal of rock cutting and filling to improve the grades. Beyond that point, a fine agricultural country is entered. The road was completed for a distance of  $9\frac{1}{2}$  miles, terminating on the line between Concessions 1 and 2, between Lots 6 and 7, Township of Hanmer. Numerous culverts and small bridges had to be renewed on this road and deep drains constructed. The road is now in first class condition, but owing to the large amount of traffic which will pass over it from the settlement in the Valley, parts of it require to be surfaced with gravel or rock.

*Froud Mine Road:*

From a point on the Sudbury and Blezard Valley trunk road about two miles north of the Town of Sudbury, a road to the Froud Mine having a length of  $11\frac{1}{2}$  11 L.M.



miles was constructed. This road passes through a rough, rocky section; the rocky hills had to be cut down and the valleys filled; it was also found necessary, owing to the great amount of traffic that passes over this road, to re-surface it with stone. Rock was crushed near the Froud Mine and placed on the road. It is now a first class macadam road, well drained.

#### *Garson Mine Trunk Road.*

Commencing at a point on the Sudbury and Brezard Valley Trunk Road, about two miles north of the town of Sudbury and extending to the Garson Mine in the township of Garson, through the townships of McKim, Neelon and Garson (distant  $8\frac{1}{2}$  miles)  $4\frac{1}{4}$  miles of old road were regraded and ditched, and  $\frac{1}{2}$  mile macadamized and  $4\frac{1}{4}$  miles of new road was graded and macadamized. The new road passes through a light sandy country, where it was found impassable



Bridge, 325 ft. long, over the Opickinimika River, Mile 13, West Shining Tree Road.

for heavy traffic without resurfacing with stone. Crushed rock was secured at the Moose Mountain Mine on the Canadian Northern Railway, and landed at the point on the road where it crosses the railway, at a cost of 75c. per ton; also rock from the waste dumps at the Garson Mine, where no charge was made. Over 5,000 tons of rock was used on this road. The balance of the road was high, and is now well graded and ditched. Several small bridges were constructed and corrugated iron culverts were placed on the small streams, the westerly five miles of this road passes through a fairly good agricultural country, the latter portion through a light sandy section.

#### *West Shining Tree Mining Road.*

Commencing at a point on the Canadian Northern Railway at mileage  $78\frac{1}{2}$  north of the town of Sudbury, on the east shore of Duchabanning Lake, thence northerly, passing the north end of Deschenes Lake, and north-easterly through

townships of Garvey, Garibaldi, part of Miramichi and Asquith, to the south-east end of West Shining Tree Lake,, a distance of nineteen miles. This road was cut out 40 feet in width through a virgin forest of jack pine, spruce, white birch and poplar, and a few scattering groves of red and white pine. The road crosses the Opickinimika River about thirteen miles north-east of the railway. The road to this point has been nearly all well graded and cross-layed in places, several culverts have been built, and at the Opickinimika River a first class wooden bridge has been constructed, 325 feet long, built on piers filled with rock. A bridge was also built across the Papoose Creek, about a mile east of Opickinimika, having a length of 196 feet, also one across Temple Creek 50 feet long. This work was done since the 31st October. East of the river the road has been well cut out and well graded and is a first class winter road and suitable for light summer traffic.

The road passes through a country generally rolling with sand or gravel ridges, along which the road followed. Several of the sand ridges had to be cut down but little or no rock was met with on the road. There are very few heavy grades and this road is now in the condition for traffic. The road is almost completed to the gold mines now being operated.

From the end of the road at Shining Tree Lake there is a winter road cut out by the miners so as to enable them to take in supplies during the winter season. This road, however, is not fit for summer traffic.

This road, besides serving the requirements of the mining community, will be a useful road later on when timber operations are being carried on in this district in the future, as it opens up a section of the country in which there was no communication by way of roads.

SAULT STE. MARIE AND SUDBURY TRUNK ROAD.

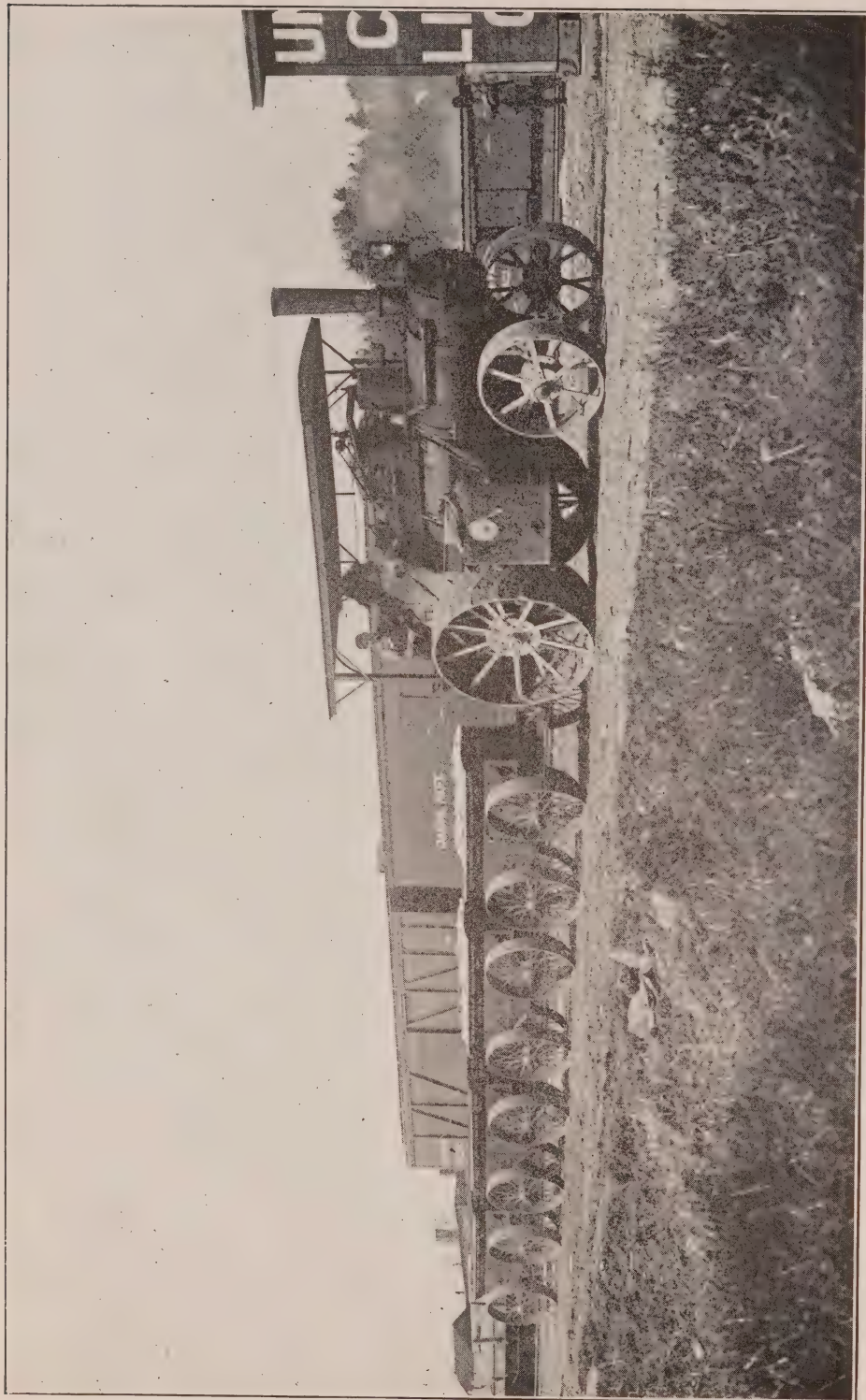
Total Expenditure .....	\$76,275 40
Total number of miles graded .....	35
of which 10 miles has been macadamized, and $\frac{3}{4}$ of a mile surfaced with rocmac, and 13 miles surfaced with gravel.	

This road commences at the eastern limit of the town of Sault Ste. Marie and runs in an easterly and southerly direction to Echo Bay (Ekoba), a distance of fifteen miles; thence easterly a further distance of ten miles, to the village of McLennan, thence continuing easterly a further distance of 5½ miles to the village of Desbarats, thence easterly two miles to Portlock, thence easterly six miles to Bruce Mines, thence easterly nine miles to Thessalon; thence easterly to Blind River, distant eighty-three miles from Sault Ste. Marie.

Of the distance between these two points, thirty-five miles of road was ditched and graded, of which ten miles has been macadamized and  $\frac{3}{4}$  of a mile surfaced with rocmac and thirteen miles surfaced with gravel.

This road, after leaving the town of Sault Ste. Marie, passes through the Garden River Indian Reserve, the townships of Tarbutt and Tarbutt Additional, Johnson, Plummer and Plummer Additional, Lefroy, Thessalon, Bright and Bright Additional, Thompson and part of Cobden, past the villages of Garden River, Echo Bay, Bar River, Desbarats, Portlock, Bruce Mines, Thessalon and Blind River. It follows in most instances the old colonization roads constructed at different times. The road is well selected where it would serve the greatest number of people, taking into consideration the character of the country to be passed through. It passes





Loading Crushed Rock at Echo Bay for the Sudbury and Sault Ste. Marie Trunk Road.



through a country in which there is a fair percentage of good agricultural land, under cultivation. In places the country is broken and rocky. Tributary to this road on the north are to be found areas of good land well cultivated. Large clearings and fine buildings are to be met with everywhere.

Owing to the unsatisfactory condition of the roads heretofore, it has been difficult and at periods almost impossible for the settlers to reach good markets at Sault Ste. Marie or other smaller towns along the railway. The road as now constructed will allow the settlers as far as Blind River, about eighty miles east of Sault Ste. Marie, to reach that point. It will also give them access to all the stations along the Canadian Pacific Railway.

Part of the road only has been surfaced with gravel or stone and it will take another season to finish the road to Blind River. Several culverts and small bridges are required to be built. The work as performed this season covered the worst parts of the road, thirty-five miles out of the eighty. The following is a general description of the work done:—

Commencing at the eastern limit of the town of Sault Ste. Marie and running east, the road was well graded and ditched for eleven miles. The first  $\frac{3}{4}$  of a mile, after being macadamized, was surfaced with rocmac 12 feet wide. The next  $\frac{3}{4}$  of a mile was covered with three course macadam 12 feet wide. This mile and a half of the road had a very bad sub-grade and it was necessary to make the stone from ten to twelve inches deep, consolidated. The balance of this section up to mileage  $5\frac{1}{2}$  was covered with two course stone.

Section two extended from Garden River to Echo Bay. The work done in this connection consisted of raising, widening, riprapping and railing Echo Bay fill, the North Channel fill and the Root River fill. Gravel put down on this road during the winter of 1912 was found insufficient. It was raked and rolled and the whole section regraded and widened and resurfaced with one course of limestone. A gap is thus left unsurfaced of nearly a mile between Root River at mileage  $5\frac{1}{2}$  and mileage  $6\frac{1}{2}$ . Eight miles of road were under construction.

Section No. 3.—The work done in this section consisted of grading and draining between mileage 15, Echo Bay, and mileage  $20\frac{1}{2}$ , a large amount of riprapping was necessary as a considerable portion of this section of the road had been badly washed out, the ditches having been deepened and widened by freshets so that it was dangerous for teams to pass owing to the narrow road bed. A new right-of-way was required for a distance of  $\frac{3}{4}$  of a mile. This was purchased from the adjoining land owners and a new road constructed. This section was also gravelled with the exception of  $2\frac{3}{4}$  miles, which was left to be gravelled during the winter season on account of the long haul. This work has been completed since the close of the fiscal year. Ten Corrugated Iron Culverts were placed in this section.

Section No. 4.—This camp built and graded the section between Nestorville, Mile  $44\frac{1}{4}$  and Mile  $49\frac{3}{4}$ , a distance of five and a half miles. Gravel was also placed between mile  $44\frac{1}{4}$  and mile 48; the remainder being left unsurfaced on account of there being no material available without too long a summer haul. This work followed in the main an already existing road, which, however, was little more than a trail. The construction was practically new. On this section twenty-one metal culverts were placed.

Section No. 5.—This camp built, graded, drained and gravelled three miles of a road immediately east of Portlock, between mile  $34\frac{1}{2}$  and mile  $37\frac{1}{2}$ . As in Section 4 this road was already in existence as a mere trail. A considerable amount

of rock work was necessary as there were a number of abrupt rocky ridges. This work comprised the westerly half of the Portlock—Bruce Mines Section; the remainder being in quite good condition and requiring only permanent culverts, some of which are in place ready to be installed in the spring. The number of metal culverts placed in this section was eighteen. It was intended also that this camp should put in permanent culverts between Desbarats and McLennan, which road was, with this exception, in fairly good condition. There was not time to do this on account of the lateness of the season and the culverts are stored at the village of Desbarats, to be installed during the coming season.

Section No. 6.—This camp built  $4\frac{1}{2}$  miles of road along the Mississaga River west of the town of Blind River, from mile  $78\frac{1}{4}$  to mile 83. The work followed the lines of an existing road in the main, but is practically new construction throughout. For almost the entire distance the right-of-way had to be cleared and straightened. In several places as well a considerable amount of filling had to be done as the previous road was impassable for several weeks during the year, at high water of the Mississaga River. On this stretch of road twenty-one metal culverts were placed.

Besides the above mentioned roads, the following works were constructed:

A reinforced concrete culvert 6 x 6, one and one half miles east of Portlock and two reinforced concrete bridges near Portlock, one 16 ft. and the other 30 ft. span. A reinforced concrete bridge over Anderson Creek, between McLennan and Desbarats was also built and the road straightened at this point. This involved diverting Anderson Creek and a considerable fill, stone being for the base.

Culverts used in this work were for the most part corrugated iron pipe, finished where necessary with concrete ends. The road between Sault Ste. Marie and Thessalon is now in first class condition with the exception of about  $\frac{7}{8}$  of a mile east of Root River, which requires to be resurfaced with stone.

## PART OF THE DISTRICT OF ALGOMA, ROADS IN THE VICINITY OF THE TOWN OF HEARST.

Amount Expended .....	\$18,529 61
Number of miles of bush line cut out .....	29
Number of miles of road graded or partially graded .....	7

### DESCRIPTION OF ROADS CONSTRUCTED.

#### *Road No. 1.—Townships of Way and Hanlan:*

Situate along the north side of the right-of-way of the National Transcontinental Railway.

Commencing at the east boundary of the township of Way, near the junction of the Algoma Central and Hudson Bay Railway, and extending westerly along the north side of the National Transcontinental Railway a distance of  $5\frac{1}{2}$  miles to the side road between Lots 18 and 19, township of Hanlan. This road was cut out the full 66 feet; 2.2 miles of the road was well grubbed and the timber burned. One mile of cross-lay was laid and well ditched and graded. The balance of the road, 3.3 miles is still to be burned and grubbed.

*Road No. 2.—Township of Kendall and Way:*

Situate between townships of Kendall and Way across Concessions 7, 8, 9, 10, 11 and 12 and part of Concession 1, township of Casgrain, 4.3 miles. Road cut the full width and grubbed 32 ft. and burned, with the exception of about one quarter of a mile on Concession 7 on the Transcontinental Railway, south to the Mattawashquia River about half a mile, the road has been well ditched and graded.

*Road No. 3.—Township of Kendall:*

Situate between Lots 24 and 25 across Concessions 11 and 12,  $1\frac{1}{2}$  miles. The road was cut, grubbed, and burnt ready for grading with the exception of a few chains on Concession 12.

*Road No. 4.—Township of Kendall:*

Situate between Lots 12 and 13 across Concessions 7, 8, 9, 10 and part of 11, 3 1-3 miles. The road was cut, grubbed and burnt ready for grading.

*Road No. 5.—Front St. Extension, Townships of Kendall and Way:*

Front St., in the Town of Hearst, was produced westerly along the southerly limit of the Transcontinental Railway Company's station grounds to the Algoma Central Railway right-of-way  $1\frac{1}{4}$  miles. The road was cut out and burned in 1912. In 1913 it was well ditched and graded.

*Road No. 6.—Township of Kendall:*

Situate between Concessions 10 and 11, across Lots 22, 23 and 24,  $\frac{3}{4}$  of a mile. The road was cut out, grubbed and burnt, ready for grading.

*Road No. 7.—Township of Kendall:*

North Boundary of Kendall, through Lots 13 to 29, both inclusive, 5.2 miles. The road was cut out, well grubbed and burning completed with the exception of Lots 18 to 27.

*Road No. 8:*

Trunk road along Transcontinental Railway, north side, from the east end of the Transcontinental Railway Company's station grounds at Hearst east to the east boundary of the township of Kendall, eight miles. The road was cut out the usual width, 66 ft. The west 2  $\frac{6}{10}$  miles has been grubbed and burned off and the balance has been burnt over but not grubbed.

Besides the above roads, part of 9th Street and part of 10th Street in the town plot of Hearst were stumped and graded about half a mile. Part of Front Street about half a mile was graded.

It was found when cutting out and grading the roads in the vicinity of Hearst that little or no difficulty was met with in getting sufficient drainage, although in places the ground was level and inclined to be semi-muskeg. In the higher land the soil is first class clay loam. No sand or gravel was met with. The roads as cut out will allow settlers who have taken up lands in the town-



ships adjacent to the town plot an opportunity of reaching the station. All roads cut out will make first class winter roads. The road between the town of Hearst and the Algoma Central Railway is in good condition for both summer and winter traffic.

It was found necessary to construct a small office and storehouse combined for the storing of supplies and machinery. The building was constructed on the Lots 142 to 149 on George Street, west of 11th Street, owned by the Department. The lots were well stumped as a protection against fire, before the building was erected.

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### GENERAL DESCRIPTION OF ROADS CONSTRUCTED AND IMPROVED IN 1913 IN THE DISTRICT OF TEMISKAMING, ALONG THE LINE OF THE GRAND TRUNK PACIFIC AND THE TEMISKAMING AND NORTHERN ONTARIO RAILWAYS.

(All roads cut out the full width 66 feet and the centre 32 feet grubbed ready for grading and ditching.)

Total number of miles of road under construction.....	190
Number of miles of bush road cut out.....	138
Amount expended .....	\$230,704.37

#### *Road No. 1.—Township of Bradburn:*

Situate along the north boundary of the above township on the Grand Trunk Pacific Railway, commencing at Lot 7 and extending west across part of Lot 7 and all of Lots 8, 9, 10, 11 and 12, 1.75 miles. Road cut 66 feet wide, the centre 32 feet well grubbed and all the timber and brush burned off.

#### *Road No. 2.—Township of Bradburn:*

Situate between Lots 12 and 13, across Concessions 7, 8, 9, 10, 11 and 12, 4.7 miles. Road was cut and grubbed and burning completed with the exception of 75 chains on Concession 8.

#### *Road No. 3.—Township of Bradburn:*

Situate between Concessions 6 and 7, across Lots 1 to 22 to the Mattagami River, 6.73 miles. Road cut and grubbed but not burnt.

#### *Road No. 4.—Township of Calder:*

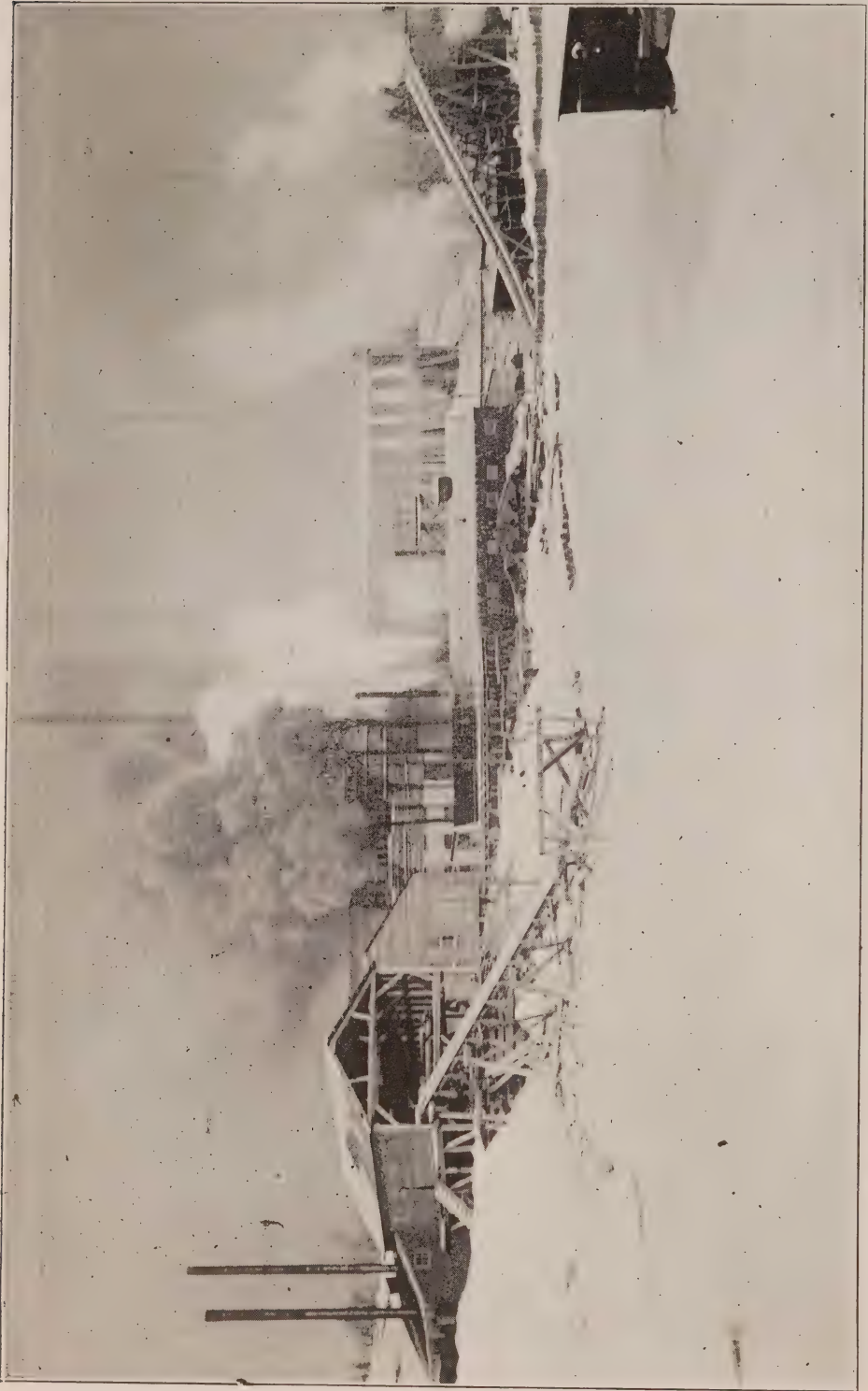
Situate along west boundary across Concessions 1 to 12 inclusive, 9 miles. Eight miles of the road has been cut and grubbed. The burning has yet to be done for over 6½ miles.

#### *Road No. 5.—Township of Calder:*

Situate along the north boundary across part of Lot 4 and all of Lots 5 to 28, both inclusive, 7.76 miles. Road cut and burned off.



Interior of the Abitibi Pulp & Paper Company's Mills, Iroquois Falls, Abitibi River, District of Temiskaming.



Saw Mill, Wood Room and Contracting Plant of the Abitibi Pulp & Paper Company at Iroquois Falls, Abitibi River.



*Road No. 6.—Township of Colquhoun:*

Situate between Concessions 6 and 7, across Lots 13 to 28, both inclusive, 5.06 miles. Road cut, grubbed and burned with the exception of part of Lots 18, 19, 20 and 21.

*Road No. 7.—Township of Colquhoun:*

Situate between Lots 12 and 13 across Concessions 1 to 6, both inclusive,  $4\frac{1}{2}$  miles. Road cut, grubbed and all timber and brush burned off.



Trunk Road north of Cochrane, between Lots 18 and 19, Glackmeyer.

*Road No. 8.—Township of Calder:*

Situate between Lots 12 and 13 across Concessions 1 to 12, both inclusive. This road was cut last season (1912), but owing to the wet season it was impossible to complete the burning or grubbing. The burning was completed this season (1913) but there is yet some grubbing to be done on Concessions 3 and 4. This season 3.11 miles were well ditched and graded between Concessions 4 and 10.

*Road No. 9.—Township of Calder:*

Situate between Concessions 6 and 7 across Lots 1 to 28, both inclusive. This road was cut out last season (1912) across Lots 1 to 28, but the burning or grubbing was not all done. This season the burning was completed. Across part Lots 13, 14, 15, 16, 17, 24 and 25 the road was well ditched and graded.

*Road No. 10.—Township of Clute:*

Situate along the west boundary across Concessions 1 to 10. Last season (1912) this road was cut, but owing to the wet season the grubbing and burning was not completed. This season the burning and the grubbing was completed and also the road cut across part of Concession 2 and all of Concession 1, 1.43 miles, grubbed and all brush and timber burned off. All the culverts required were constructed across Concessions 1 to 6, both inclusive, and the bridge over Deception Creek on Concession 5 was rebuilt. The old bridge was carried away by the spring freshet 1913. The road was then ditched and graded across Concessions 1 to 6. Concessions 7, 8 and 9 are now ready for ditching and grading.



A Typical View of the Clay Lands in the Abitibi Valley, looking east across the Townships of Brower and Fox.

*Road No. 11.—Township of Clute:*

Situate along the south boundary across Lots 1 to 19 both inclusive, and Lots 23 to 28 both inclusive, 7.78 miles. This road, with the exception of Lots 23 to 28 both inclusive, was cut last season (1912) but not all burned or grubbed. This year, last season's work was all burned over, and the road well grubbed across Lots 1 to Frederick House River,  $1\frac{1}{2}$  miles of corduroy was laid across part Lots 1 to 7 and a bridge built over creek on Lot 6; 1.77 miles across parts of Lots 1 to 6 were well ditched and graded. The balance of the road to the Frederick House River is ready for ditching. This year the road was also cut across Lots 23 to 28 both inclusive, well grubbed and all brush and timber burned off. Lots 28, to the west side of the Buskego River, were then well ditched and graded.



*Road No. 12.—Township of Clute:*

Situate between Concessions 2 and 3 across Lots 1 to 7, to the Grand Trunk Pacific Railway, 2.24 miles. This road was cut out this season, partly grubbed and burned over once. It still requires to be graded and two small bridges built. It was cut to serve as a winter road.

*Road No. 13.—Township of Clute:*

Situate between Concessions 6 and 7 across Lots 1 to 28 both inclusive, nine miles. This road was all cut out last season (1912), but was not all burned or grubbed. Across Lots 1 to Frederick House River was partly graded last season (1912). This season, however, it was found necessary to deepen the ditch 2.68



On the Town Line between Glackmeyer and Lamarche, east of Cochrane, showing how Clay Roads are rutted during the wet season.

miles from the Frederick House River, west across Lots 10 to 28 was all burned off, and the road well ditched and graded from the river west across Lots 10 to 26 inclusive. Lots 27 and 28 have yet to be ditched and one small bridge to be constructed on Lot 27.

*Road No. 14.—Township of Clute:*

Situate between Concessions 8 and 9 across Lots 1 to 5 and part of 6 and across Lot 28, a distance of 1.95 miles. This road was cut this year, well grubbed and the burning completed across Lots 1 to 3. No grading done.

*Road No. 15.—Township of Clute:*

Situate between Lots 18 and 19, across Concessions 1 to 12, both inclusive, nine miles. This road was all cut last season (1912), but was not all grubbed or



burned. This year it was burned across Concessions 1 to 4 to the Grand Trunk Pacific Railway and across Concessions 7 to 10, in all 5.50 miles. Concession 7 was well grubbed but not graded.

*Road No. 16.—Township of Clute:*

Situate between Lots 12 and 13 across Concessions 1 to 8, six miles. Across Concessions 1, 2 and part of 3 to the Grand Trunk Pacific Railway, 1.93 miles was cut out this season but was not grubbed. This latter section was also burned off. From the Grand Trunk Pacific Railway north across part of Concession 4



Mr. Frank Moberly's Cabbage Garden, north of Abitibi Lake, near the Quebec Boundary.

and all of Concessions 5 and 6 the road had been partly built three years ago by the Colonization Road Branch. This season it was all gone over, re-ditched and several new culverts put in. A new bridge 100 ft. long was built in place of a temporary one across the Buskego River, the old one having been carried away by the spring freshets. From the Buskego River north across part of Concession 6 the road was well ditched and across Concessions 7 and 8 well grubbed ready for ditching.

*Road No. 17.—Township of Leitch:*

Situate between Concessions 6 and 7 across Lots 1 to 6, 2.07 miles. This road was cut this year, grubbed and burning completed except a few chains on Lots 5 and 6. No grading was done. Three small bridges will be required to be built.

*Road No. 18.—Township of Leitch:*

Situate along the south boundary across Lots 1 to 10 to the Frederick House River, 2.91 miles. This road was cut last season (1912), but the grubbing and burning was not completed. This year Lots 1, 2, 3 and part of Lot 4, in all 1.12 miles, were burned over. Across part of Lot 1, 22.10 chains were graded.



Another view of Mr. Frank Moberly's Farm.

*Road No. 19.—Township of Blount:*

Situate along the west boundary across Concessions 1 to 10, 7.50 miles. Across Concessions 1 to 4, three miles, the road was cut last season (1912) but was not all burned. This season Concessions 1 to 4 were burned off, and the road cut, grubbed and burned across Concessions 5 and 6, 1.50 miles. Concessions 7 to 10 were cut, but only partly grubbed and burned. The road across Concessions 1 to 6 was well ditched and graded for 4.50 miles.

*Road No. 20.—Township of Blount:*

Situate along the south boundary from the west side of Lake Dora west across 15 to 28, 4.54 miles. This road was all cut last season (1912) but the burning and grubbing had not been completed. This season the road was all graded and a bridge built over Lillabelle Creek, Lot 25.

*Road No. 21.—Township of Blount:*

Situate between Concessions 6 and 7 across part of Lot 28, 10 chains. This road was cut this season but not burned or grubbed.



A Road through a Spruce Swamp, east of Cochrane Clay Belt.

*Road No. 22.—Township of Blount:*

Situate between Lots 18 and 19, across Concession 1 and part of Concession 2 to the Abitibi River, 1.30 miles. This road was cut last season (1912) and this season the road was all graded.

*Road No. 23.—Township of Glackmeyer:*

Situate along the west boundary for nine miles. This road was cut last season (1912) and partly graded, but owing to the wet weather was not all burned off. This year the remainder of the road has all been burned off. From the Grand Trunk Pacific Railway north across part of Concession 2 and all of Concessions 3 to 6 the grade was widened from 24 to 30 feet and ditches deepened throughout. A new bridge was built across creek on Concession 7 and several new culverts put in.



*Road No. 24.—Township of Glackmeyer:*

Situate between Lots 24 and 25 across Concessions 2, 3, and 4, 2.25 miles. This road was partly built three years ago and was in need of repair. This season Concession 2 was all reditched and graded for a distance of 60 chains.

*Road No. 25.—Township of Glackmeyer:*

Situate between Lots 18 and 19 across Concessions 1 to 12, both inclusive, nine miles. This road was built four years ago and was in need of repair. This season 30 chains across Concession 2 were regraded. A large sand hill on Concession 4 cut down and corduroy relaid on Concession 5, the old corduroy having



A Settler's Home on the Trunk Road six miles east of Cochrane, overlooking the Valley of the Abitibi, North Boundary of Brower.

been burned during the dry spell in July, 1913. Clay was then drawn and spread over this corduroy. Across Concessions 6 to 12 the road bed was widened from 24 to 30 ft. and the whole road across Concessions 1 to 12, both inclusive, regraded. Across Concessions 7 to 12 required burning. This was partly done this season.

*Road No. 26.—Township of Glackmeyer:*

Situate between lots 12 and 13 across Concessions 1 to 6, 4.50 miles. This road was cut last season (1912) but was not burned. Last winter two pile bridges, 75 and 100 ft. in length, were built on Brule or Brower Creek crossing this road, one on Concession 2 the other on Concession 6. This latter bridge was damaged by high water this spring and was repaired. This season the road was all burned off and well grubbed. All the culverts necessary were then put in and the road was all ditched and graded.

*Road No. 27.—Township of Glackmeyer:*

Situate along the south boundary 7.43 miles to the Abitibi River. This road was cut last season (1912) and partly graded, but little or no burning had been done. Last winter a pile bridge 50 ft. long was built over Brule Creek on Lot 11. This season the road was all burned off. The grubbing was done and 5,300 feet of corduroy laid across part of Lots 14 to 17. The whole road was then ditched and graded. During the dry weather in July ten chains of corduroy were burned across Lot 23. In place of relaying the corduroy, clay was drawn and used for grading.

*Road No. 28.—Township of Glackmeyer:*

Situate between Concessions 1 and 2, across Lots 19, 20, 21 and part of Lot 22, to intersect 9th Ave., Town of Cochrane, a distance of 1.12 miles. This road was cut out, well graded and ditched.



Headquarters of the Northern Development Branch at Ground Hog River, Transcontinental Railway. Showing Vegetable Garden.

*Road No. 29.—Township of Glackmeyer:*

Situate between Concessions 2 and 3 across Lots 1 to 28, both inclusive, nine miles. Part of this road across Lots 7 to 21, inclusive, had been cut, and across Lots 14 to 28 both inclusive, partly graded, by the Colonization Road Branch two years ago. This season the road was cut, grubbed and burned off across Lots 1 to 6, 1.88 miles, and across Lots 25 to 28, a distance of 1.32 miles. Lots 7 to 13, both inclusive, were grubbed. Lots 4 to 13 were ditched and graded. The bridge over Brule Creek, damaged by high water, was repaired. Lots 14 to 15 were ditched. Lots 19 to 21, both inclusive, were grubbed, and Lots 22 to 28, both inclusive, cut out, grubbed and all timber burned off. Bridges were built on Lot 21 and 22, and 60 chains of corduroy laid on Lots 25 to 27. From Lots 19 to 28, both inclusive, the road was then ditched and graded. Across Lot 7, ten chains of cross-lay were laid.



*Road No. 30.—Township of Glackmeyer:*

Situate between Concessions 4 and 5, from Abitibi River, west across to Lot 21 to the east side of Lillabelle Lake, 6.05 miles. Part of this road was cut four years ago from Lot 15 to Lillabelle Lake. This season the cutting was continued to the Abitibi River across Lots 14 to 2, 3.87 miles, grubbed and brush and timber burned off. The road was also well ditched and graded across Lots 6 to 18 and a bridge built over creek on Lot 11, and 70 chains of small corduroy laid across part Lots 9 to 11.

*Road No. 31.—Township of Glackmeyer:*

Situate between Concessions 6 and 7 from the Abitibi River, east of Lot 4, west across Lots 4 to 28 inclusive, eight miles. This road was all cut last season (1912) but was not all grubbed or grubbed. This season the road was all graded and burned off. The bridges on Lots 11, 12 and 23 had to be repaired, having been damaged by spring floods.



Vegetables at the Ground Hog River, old Headquarters of Fauquier Bros., Railway Contractors, Transcontinental Railway, July 15th.

*Road No. 32.—Township of Glackmeyer:*

Situate between Concessions 8 and 9 across Lots 19 to 28, 3.23 miles. Road cut, well grubbed and all brush and timber burned off.

*Road No. 33.—Township of Glackmeyer:*

Situate between Concessions 10 and 11 across Lots 13 to 19, both inclusive, 2.21 miles. This road was completed this season, with the exception of two culverts on Lot 13 and some burning on Lots 13, 14, and 15.

*Road No. 34, Township of Kennedy:*

Situate along the west boundary from the Abitibi River north across part of Concession 3 and all of 4 and 5 and part of 6, 1.70 miles. This road was cut this season, grubbed and the burning partly done.



*Road No. 35.—Township of Kennedy:*

Situate between Lots 23 and 25 across Concessions 1 to 4, three miles. This road was cut last season (1912) but was not burned. This season it was all burned off.

*Road No. 36.—Township of Kennedy:*

Situate between Lots 12 and 13 across Concessions 1 to 8, both inclusive, six miles. This road was cut this season, well grubbed and the burning completed with the exception of Concessions 7 and 8.

*Road No. 37.—Township of Kennedy:*

Situate along the south boundary across Lots 13 to 28, both inclusive, 3.80 miles. Part of this road was cut out last season (1912), but no burning or grading



Saw Mill and Rossing Plant of the New Ontario Colonization Co. on the Mattagami River, Township of Kendrey.

was done with the exception of Lot 28 and part of Lot 27 west of the Abitibi River, a distance of 44.05 chains. This piece was partly graded in 1912 and repaired this season. The burning east of the Abitibi River from Lots 13 to 26 inclusive, 3.56 miles, was done this season. The road across part of Lot 15 and all of Lots 14 and 13, 54.83 chains, was cut, and all timber and brush burned off. From the junction of the road, between Lots 2 and 3, township of Brower, to the west bank of the Abitibi River, 1.05 miles was well ditched and graded and the hill on east bank of river cut down.

*Road No. 38.—Township of Kennedy:*

Situate between Concessions 4 and 5, across Lots 25 to 28, 1.14 miles. This road was cut, grubbed and the burning completed, with the exception of Lot 27.

*Road No. 39.—Township of Kennedy:*

Situate between Concessions 6 and 7, across Lots 1 to 16, both inclusive, five miles. This road was cut, well grubbed and most of the burning completed.

*Road No. 40.—Township of Lamarche:*

Situate between Lots 8 and 9, across Concessions 1 to 6, six miles. Part of this road was built last season (1912). All of Concession 6 was ditched and part of Concession 4, and the road cut south across half of Concession 2, but little or no burning had been done. This season the burning was completed over last year's work (1912). A pile bridge, single span, was built over creek on Concession 4.



View of the Macadamized Road east of Sault Ste Marie, on the Sudbury and Sault Ste. Marie Trunk Road.

The cutting was extended this season across Concession 1 and half of Concession 2,  $1\frac{1}{2}$  miles. This road was cut, grubbed and the burning almost completed. The road is now ditched and graded across Concessions 3 to 6, and 20 chains across Concession 2.

*Road No. 41.—Township of Lamarche:*

Situate between Lots 6 and 7, across Concessions 2 to 5, and part of 1,  $4\frac{3}{4}$  miles. This road was cut, grubbed and the burning nearly all completed. The road has been well ditched and graded across Concessions 3 to 5.

*Road No. 42.—Township of Lamarche:*

Situate between Concessions 1 and 2, across Lots 1 to 4 inclusive, and part of 5 to the east side of lake,  $2\frac{1}{4}$  miles. This road was cut, the first mile through a very heavy windfall, grubbed, but not burned.

*Road No. 43.—Township of Lamarche:*

Situate between Concessions 3 and 4, across Lots 1 to 6, 3 miles. Across Lot 1 and Part of Lot 2, in all 66 chains, the road was well ditched and graded. The balance of this road is cut out, grubbed, but the burning is not all done. From where the road crosses the Temiskaming and Northern Ontario Railway a road 30 ft. wide, well grubbed, was cut on each side of the track south to the railway station, a distance of 10 chains.

*Road No. 44.—Township of Lamarche:*

Situate between Concessions 5 and 6, across Lots 7 and 8, in all one mile. This road was cut out and graded.



Sudbury and Sault Ste. Marie Trunk Road Crossing Root River, close to the Canadian Pacific Railway.

*Road No. 45.—Township of Brower:*

Situate along the west boundary from the Temiskaming & Northern Ontario Railway, north across Concessions 2 to 6, in all  $4\frac{3}{4}$  miles. This road was cut last season (1912) but was not burned. This season it was all burned off and graded. A pile bridge was built over Brule Creek, Concession 6.

*Road No. 46.—Township of Brower:*

Situate between Lots 2 and 3, across Concessions 3 to 6, four miles. This road was cut and partly graded last season (1912). This season the road has been completed and a bridge built on Concession 6.



*Road No. 47.—Township of Brower:*

Situate along the south boundary, in all  $5\frac{1}{2}$  miles. This road was cut last season (1912) but was not burned off. This year part of Lot 12 and all of Lots 2 to 8 were burned, in all  $3\frac{3}{4}$  miles.

*Road No. 48.—Township of Brower:*

Situate between Concessions 3 and 4, from Lot 1 to the Grand Trunk Pacific Railway  $1\frac{1}{4}$  miles, and across Lots 6 to 12,  $3\frac{1}{2}$  miles. This road was cut this season, grubbed and burning completed over Lots 1, 2, and part of 3, 11 and 12. Lots 11 and 12 (1 mile) were well ditched and graded.



A Settler and Local Mill Owner, Mr. Genier, on Lot 19, Concession 11, Glackmeyer,  $8\frac{1}{2}$  miles north-east of Cochrane.

*Road No. 49.—Township of Brower:*

Situate between Concessions 2 and 3, across Lots 1 and 2, in all one mile. This road was cut last season (1912) but not burned. This year it was burned and graded.

*Road No. 50.—Township of Fox:*

Situate along the west boundary across Concessions 1 and 2, in all 2 miles. This road was cut last season (1912) but not burned. This season Concession 2 was burned off.

*Road No. 51.—Township of Fox:*

Situate between Lots 6 and 7, across Concessions 2 and 3, to the Grand Trunk Pacific Railway, a distance of  $1\frac{1}{2}$  miles. This road was cut and grubbed this season, but not burned.

*Road No. 52.—Township of Fox:*

Situate along the south boundary across Lots 12 and 11, one mile. This road was cut last season (1912), but was not burned. This season this road was burned off.

*Road No. 53.—Township of Fox:*

Situate between Concessions 3 and 4, across Lots 2 to 11, a distance of  $5\frac{1}{4}$  miles. This road was cut, well grubbed and most of the timber and brush burned off. There remains a little burning to be done on Lots 2 to 7.



Town of Cochrane at the Junction of the Temiskaming and Northern Ontario and Grand Trunk Pacific Railways.

*Road No. 54.—Township of Sargent:*

Situate along the north side of the Grand Trunk Pacific Railway, across Lots 1 to 34, both inclusive, a distance of 10.91 miles. Part of this road, lots 14 to 34 inclusive, 6.58 miles, was cut season of 1912, but not burned off. This season the burning was completed over last season's work and the road cut, well grubbed and the burning completed across Lots 1 to 12 inclusive and to the Quebec boundary, a distance of 2.33 miles. The road is now nearly all ready for ditching and grading.

*Road No. 55.—Township of Sargent:*

Situate between Lots 4 and 5 across Concessions 5, 6 and 7, 2.35 miles. This road was cut, well grubbed and most of the burning completed and is now ready for grading, except part of Concession 5.



*Road No. 56.—Township of Calvert:*

Situate along the Temiskaming & Northern Ontario Railway spur from Porquois Junction (Iroquois Falls) into the Abitibi River Pulp and Paper Mills at Iroquois Falls, 6.36 miles. This work was done this season. The road commences on the north boundary of the Township of Clergue and extends north between Lots 9 and 10, Township of Calvert, to the Temiskaming and Northern Ontario Spur to the Abitibi River. It then parallels the railway on the south-east side for a little over five miles, then crosses the railway and follows the north-west side into the Pulp Company's yards and townsite. This road was cut out, corduroyed, ditched and graded; 6 bridges were constructed and 14,970 feet of corduroy laid.



A Typical View of the White Birch and Poplar Lands in the Valley of the Abitibi, Township of Brower.

*Road No. 57.—Township of Clergue:*

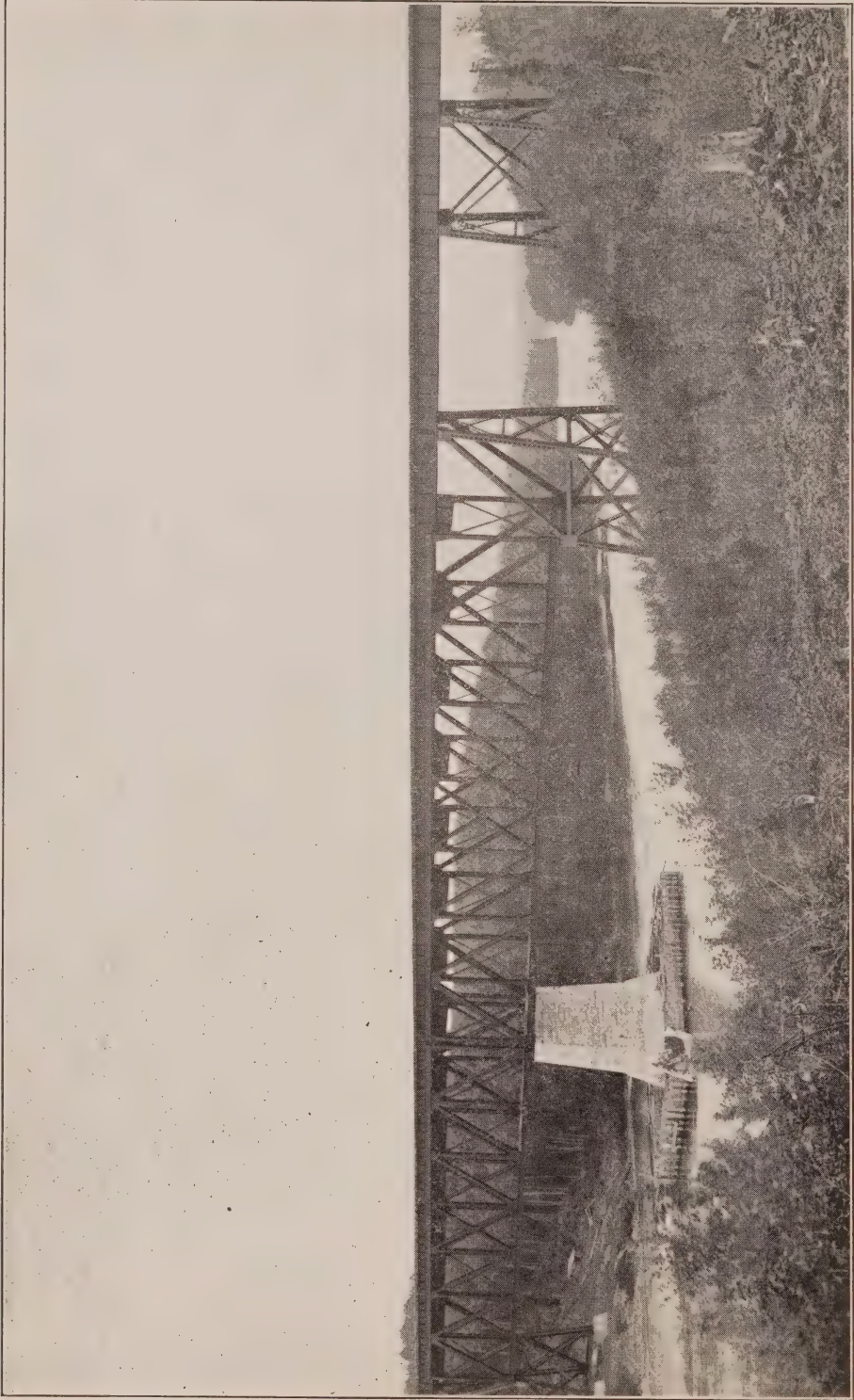
Situate along the north boundary across Lots 1 to 12, both inclusive, six miles. This road was cut season 1912, but was not burned off. This season the burning and grubbing were completed over Lots 5 to 12, and the road well ditched and graded across Lots 7 to 12 and part of 5 and 6, a distance of  $3\frac{1}{2}$  miles. A pile bridge was built over creek on Lot 9.

*Road No. 58.—Township of Clergue:*

Situate midway on Lot 10, Concession 6, from road between Lots 10 and 11 to Temiskaming and Northern Ontario Railway station at Porquois Junction, a distance of 20 chains. This road was cut but not all grubbed or burned.



17



Banks of the Abitibi River at the Grand Trunk Pacific Railway Crossing.

*Road No. 59.—Township of Clergue:*

Situate between Concessions 3 and 4, across Lots 1 to 10, five miles. This road was cut last season (1912) but not burned off. This year the burning was completed across Lots 1 to 9, both inclusive,  $4\frac{1}{2}$  miles, and the road was well ditched and graded across part of Lot 3 and all of Lots 4 to 8 and part of 9, 3.12 miles. A pile bridge was built over Meadow Creek on Lot 7.

*Road No. 60.—Township of Clergue:*

Situate between Lots 6 and 7, across part of Concession 1, all of Concessions 2, to 5 and part of 6. This road was all cut season 1912 but not burned off. It was also partly graded across Concession 4. This season the burning was all completed and the road well ditched and graded across Concessions 2 and 3, two miles. A pile bridge was built over Meadow Creek, Concession 5.



A Trunk Road one mile north-east of the Town of Cochrane, showing the Taylor Farm.

*Road No. 61.—Township of Clergue:*

Situate along the east boundary across Concessions 4 to 6, three miles. This road was cut last season (1912) across Concession 4 and 55 chains of Concession 5, but no burning had been done. This season it was all burned and the road cut north across Concession 6 and grubbed, but the burning was not all completed.

*Road No. 62.—Township of Clergue:*

Situate along the east side of the Temiskaming and Northern Ontario Railway from Porquois Junction south to mile post 220,  $3\frac{1}{2}$  miles. This road was cut, grubbed and most of the burning completed;  $1\frac{1}{4}$  miles of ditching was done on this road and  $\frac{1}{4}$  mile of corduroy laid. A pile bridge was built over creek on Lot 9.



*Road No. 63.—Township of Dundonald:*

Situate along the north boundary, for  $5\frac{1}{2}$  miles. This road was cut last season (1912) but was not burned. This season the road was burnt off and Lot 1, one half mile, was well grubbed and graded.

*Road No. 64.—Township of Matheson:*

Situate between Lots 6 and 7, across Concessions 1 to 6, both inclusive, six miles. This road was cut this season and the burning nearly completed.

*Road. No. 65.—Township of Matheson:*

Situate between Concessions 3 and 4, across Lots 1 to 10, both inclusive, in all 5 miles. This road was cut this season, grubbed and the burning nearly completed.



Field of Oats, north of Cochrane, Township of Glackmeyer.

*Road No. 66.—Townships of Machin and Fauquier:*

Situate along the north side of the Grand Trunk Pacific Railway from the Ground Hog River west for  $4\frac{3}{4}$  miles through the townships of Machin and Fauquier. This road was cut, well grubbed and all burned off, ready for grading.

*Road No. 67.—*

Situate between the town of South Porcupine and McArthur Lake, in the township of McArthur, a distance of twenty miles. About three miles of this road was partly cut out two years ago by the Colonization Road Branch. The old road was widened and repaired and the road continued to the lake. The last or south six miles was cut 20 feet wide, but suitable as winter road only. The balance of the road is well grubbed and all low places corduroyed. Bad hills were



cut down and the road fairly well graded. Four bridges were built. The road was constructed for the benefit of mine owners operating in the townships of Tisdale, Whitney, Delora, Shaw, Adams, Eldorado and McArthur, through which this road passes.

*Road No. 68.—Town of Cochrane:*

In order to reach the Union Station in the town of Cochrane, it was necessary to grade certain streets which had been laid out but not improved by the municipality.

Fourth Street was produced east to the line between Lots 18 and 19, township of Glackmeyer, from Eleventh Avenue, 1,660 feet.

The main Trunk Road from east and north-east enters the town by Fourth Street, thence north along Eleventh Avenue to Fifth Street, 600 feet; thence west



Garden at the Ground Hog River, Headquarters Fauquier Brothers, Contractors, Transcontinental Railway, July 15th.

along Fifth Street to the Lake Shore Road; thence following the Lake Shore Road along the north shore of Commando Lake to Sixth Avenue, 1,800 feet.

In order to get an outlet to the townships to the north-western part of the town of Cochrane, part of Third Avenue, part of Seventh Street, and part of Second Avenue had to be graded: in all a distance of 1,600 feet. Four hundred yards of gravel was used in re-surfacing the Lake Shore along the Commando Lake.

*No. 69.*

The Driftwood River, a tributary of the Black River, flowing through the townships of Walker, part of Clergue, Taylor and Stock, was cleared of driftwood so as to enable the settlers in these townships to navigate the river in the summer season in small boats and to enable them also to drive their pulpwood to the Abitibi Pulp Mills at Iroquois Falls on the Abitibi River. The river, as its name implies, was full of driftwood at several points, log jams having been formed through which it was impossible to drive logs or navigate boats.

ROADS IN THE DISTRICT OF TEMISKAMING, EAST AND WEST  
ALONG THE TEMISKAMING AND NORTHERN ONTARIO  
RAILWAY, FROM EARLTON NORTH TO MONTEITH.

Number of miles constructed, graded and old roads improved—150.

Amount expended \$185,612.61

*Township of Walker:*

Line between Concessions 1 and 2 across Lots 3 to 10 inclusive and between Lots 10 and 11, across the south half of Concession 2, and across the centre parts of Lots 11 and 12;  $5\frac{1}{2}$  miles. The road was cut out and burned and  $3\frac{1}{2}$  miles graded.

*Townships of Walker and Clergue:*

Town line between Walker and Clergue. This road was cut out and partly graded last season; this season the road was burned off and  $2\frac{3}{4}$  miles of the grading completed.

*Townships of Taylor and Walker:*

Town line between Taylor and Walker, across Lots 5 to 12, both inclusive, and across part of Lot 1 to the Driftwood River, between Stock and Clergue; also road between Lots 8 and 9, Concession 1, Walker, and between 8 and 9, north part of Concession 6, Taylor;  $5\frac{1}{4}$  miles. The road was cut out and grubbed and burned.

*Townships of Taylor and Stock:*

Line between Concessions 5 and 6 from Lot 1, Taylor, to Lot 5, Stock,  $8\frac{1}{2}$  miles. The road was cut out and burned. The road was graded from Lot 8 to 12, Taylor, both inclusive. The road between Lots 8 and 9, across the south part of Concession 6, half a mile was ditched.

*Township of Taylor:*

Line between Concessions 2 and 3, across Lots 1 to 7, both inclusive,  $3\frac{1}{2}$  miles. The road was cut out and grubbed and  $2\frac{1}{2}$  miles burned.

Line between Lots 4 and 5, across Concession 3 and part of Concession 2,  $1\frac{3}{4}$  miles. The road was cut out.

Road between Concessions 4 and 5, across Lots 2, 3, 4 and 5, two miles. The road was cut out and graded. Also road between Concessions 4 and 5, across Lots 7, 8, 9, 10 and part of 11, to the Driftwood River. The road was cut out and grubbed and half a mile graded. Also road between Lots 8 and 9, across Concession 5; cut out, grubbed and burned. A bridge 108 ft. in length was constructed across the Driftwood River on line between Concessions 5 and 6, Lot 1, Stock; also a bridge between Concessions 4 and 5, Lot 11, Twp. of Taylor.

*Townships of Taylor and Currie:*

Town line between Taylor and Currie, across Lots 7 to 12 inclusive. Graded three miles.

*Townships of Carr and Taylor:*

Town line between Carr and Taylor, across Concessions 1 and 2, two miles. The road was cut out,  $1\frac{1}{2}$  miles of which was graded.

*Township of Carr:*

Line between Concessions 2 and 3 across Lots 1 to 8. Cut and graded four miles.

Line between Lots 4 and 5, across Concessions 1, 2, 3, 4 and part of 5,  $4\frac{1}{2}$  miles. The first  $3\frac{1}{2}$  miles were cut out and graded, and the last mile cut and grubbed only.

*Townships of Carr and Beatty:*

Town line between Carr and Beatty, across Concessions 1, 2, 3 and part of 4,  $3\frac{1}{2}$  miles. The road was cut out last season but not burned. This season the road was burned off and graded  $3\frac{1}{2}$  miles.

*Township of Bowman:*

Line between Lots 6 and 7, across Concessions 4, 5 and 6, three miles. The road was cut out and grubbed, and  $1\frac{1}{2}$  miles graded. Also road between Concessions 3 and 4, across Lot 7,  $\frac{1}{2}$  a mile; also road between Concessions 4 and 5, across Lots 7 and 8, 1 mile; also road between Concessions 5 and 6, across Lots 7 and 8, one mile. The roads were cut out, grubbed and burned.

Line between Lots 4 and 5, across Concessions 4 and 5; also road between Concessions 3 and 4, across Lot 4 and half of Lot 3, a total distance of  $2\frac{3}{4}$  miles. The road was cut out and grubbed.

*Townships of Bowman and Currie:*

Town line between Bowman and Currie, across Concessions 6 and 5. The road which was cut out last season was burned off and graded this season; also a truss bridge 55 feet span was built over the Wahtaybeg River on Concession 5.

*Township of Hislop:*

On the town line between Hislop and Bowman. This road was cut in 1912, and this season the timber was burned off across Concessions 4, 3, 2 and 1. Concessions 4, 3 and half of 2 were graded  $2\frac{1}{2}$  miles.

The town line between Hislop and Beatty across Lots 6 to 13 inclusive, also town line between Bowman and Carr, across Lots 1, 2 and 3, to the town of Matheson was improved. The road was constructed several years ago, and was widened from 18 feet to 24 feet, and regraded in places covering a distance of six miles.

Road between Lots 11 and 12, Concession 6, one mile, between Concessions 5 and 6, across Lots 9, 10 and 11,  $1\frac{1}{2}$  miles;  $2\frac{1}{2}$  miles of this road cut and burned,  $1\frac{1}{2}$  miles graded

*Township of Playfair:*

On the north boundary of Playfair a road was cut out in 1912. This season the timber was all burned off for a distance of six miles. Seven culverts were constructed and one bridge with a span of 25 feet partially constructed.

*Trunk Road along Temiskaming and Northern Ontario Railway:*

Along the Temiskaming and Northern Ontario Railway right-of-way through part of the townships of Taylor and Carr from the line between Concessions 4 and



5, Taylor, to the Town of Matheson, a distance of eight miles; seven miles graded and one mile partly graded. On this section of the road three bridges were constructed with lengths of 120 feet, 40 feet and 20 feet.

From the town of Matheson, through part of the townships of Bowman and Hislop, continuing along the right-of-way of the Temiskaming and Northern Ontario Railway, eight miles. The timber was burned off, four miles graded and three miles re-graded. Thirty-four culverts were constructed and two small pile bridges built, each 20 feet span.

Continuing through the township of Playfair to the town line between Playfair and Cook, five miles. Ten culverts were constructed, timber on the right-of-way was burned off and one-half mile graded. Two 16-foot approaches were built on the east side of bridge constructed in 1912 across the Black River on Lot 4. In July last during the extremely dry season this bridge was burned, notwithstanding the fact that the foreman and his men were on the spot protecting it. In order, however, to save a settler's house and family, they were forced to leave the bridge, and in their absence the bridge was destroyed.

#### *Sesekinika Road:*

Commencing at Sesekinika Station on the Temiskaming and Northern Ontario Railway, on Lot 9, Concession 1, township of Maisonville, the road runs north-west along the right-of-way of said railway, crossing the same at the west side, and continuing west across part of Lot 10 and Lot 11, Concession 2, to Lot 12, thence south between Lots 11 and 12 in the said Concession to the line between Concessions 1 and 2,  $2\frac{1}{2}$  miles. This road was cut out the full width, stumped, grubbed and burned 30 ft., and one mile graded. Eight culverts and one small bridge were constructed thereon. This road was constructed to allow settlers in the south-west part of Maisonville to reach the railway station.

#### *Kirkland Lake Mining Road:*

Commencing at the village of Swastika, on the Temiskaming & Northern Ontario Ry., and running north-east through the township of Teck along the south shore of Kirkland Lake to the Township of Lebel, as far as Tough-Oakes Mines, seven miles. The road was cut out 50 feet wide and graded 26 feet wide. A bridge in the village of Swastika passing under the railway bridge across a tributary of the Blanche River was constructed 66 feet long, and one truss bridge 40 feet span across Trout Creek and 67 culverts were also constructed on this road, together with one mile of cross-lay. The road is well graded, and in places surfaced with gravel. It passes through a rocky country, timbered chiefly with Jack pine, poplar, birch and small spruce; little or no agricultural land is met with along this road. A small mining village has sprung up at Kirkland Lake, and considerable mining operations are being carried on.

#### *Townships of Boston and Lebel:*

Commencing on town line between Boston and Otto between Concessions 4 and 5 and running north-west through the townships of Boston and Lebel to the Dane Mining Camp. This was an old winter road cut out about 12 feet, which was improved to 40 feet wide and graded 20 feet wide for a distance of  $3\frac{1}{2}$  miles.

*Townships of Dack and Robillard:*

Widened grade and improved the road on the town line between the townships of Dack and Robillard, across Concessions 5 and 6, and constructed one floating bridge 100 feet in length.

*Townships of Dack and Chamberlain:*

Town line between Chamberlain and Dack across Lots 5 to 12, both inclusive, four miles. Road cut out and graded.

*Township of Chamberlain:*

Cut out, grubbed and graded road between Concessions 1 and 2, across Lots 1, 2, 3 and 4. Also road between Lots 2 and 3, across Concessions 3, 2 and north half of Concession 1, a distance of  $4\frac{1}{2}$  miles. This road was all graded with the exception of half a mile between Concessions 1 and 2.

Eight large culverts were constructed on the north boundary of the township across Lots 1 to 6 and the grades cut down.

The road on the west boundary of the township was widened, graded and improved, and continuing north between the townships of Pacaud and Marquis to the Blanche River about the centre of Concession 5, a total distance of  $10\frac{1}{2}$  miles.

*Township of Savard:*

The road between Concessions 1 and 2, across Lots 1, 2, 3 and 4, two miles, cut out, grubbed and burned, and graded half a mile.

Cut out, grubbed and ready for grading lines between Lots 6 and 7, across Concessions 1 and 2; line between Concessions 2 and 3, across Lots 7 and 8; line between Lots 8 and 9, across Concession 3. Total distance of four miles.

*Township of Robillard:*

Stumped, grubbed and graded the road between Concessions 4 and 5 from the East town line to Long Lake; five miles; and north-west along the north shore of the said lake to the west town line, one mile. Thence north along the west town line across Concession 6, Robillard, and Concession 1, Savard, two miles cut, grubbed and burned.

*Townships of Pacaud and Catherine:*

On the town line between Pacaud and Catherine the road was cut out and graded half a mile, part of Concession 3.

*Township of Marter:*

Constructed culverts and improved and widened the grade on the town line between Marter and Evanturel, across Lots 5 to 10 inclusive; also improved the grades, widened road and re-graded the road between Lots 4 and 5, across Concession 1 and part of Concession 2; also graded road between Concessions 4 and 5, across Lots 1, 2 and half of Lot 3,  $1\frac{1}{2}$  miles; also re-graded road across Concessions 4, 5, and 6, between Lots 4 and 5, three miles; and cut out the town line between Marter and Catherine across Lots 1, 2, 3 and 4, two miles; also burned off timber on road between Concessions 3 and 4, across Lot 4 and half of Lot 3, and on the road passing through the centre of Lot 3,  $1\frac{1}{2}$  miles.

Road between Lots 10 and 11, across Concessions 1 and 2, graded and improved, two miles; also graded and improved road between Concessions 2 and 3, across Lots 9 and 10, one mile; also graded and improved road between Lots 8 and 9, across Concession 3, one mile; also graded and improved road between Concessions 3 and 4, across Lots 8 to 11 inclusive, two miles; also cut out and stumped road between Lots 8 and 9, across Concessions 4 and 5, two miles.

*Township of Evanturel:*

Road between Concessions 1 and 2, across Lots 1, 2, 3 and 4, two miles, cut out, burned and grubbed.

Town line between Evanturel and Armstrong, across Lots 1 to 6, both inclusive, three miles; and the town line between Ingram and Hilliard, across Lots 1, 2, 3 and 4 and part of 5 to the Blanche River,  $2\frac{1}{4}$  miles; cut out, grubbed and burned.

*Township of Ingram:*

Cut out and graded road between Concessions 2 and 3, across Lots 1, 2, 3 and 4, two miles.

*Township of Armstrong:*

Road between Concessions 5 and 6, across Lots 1, 2, 3, 4 and 5,  $2\frac{1}{2}$  miles; cut out and burned.

*Earlton and Heaslip Road:*

Commencing at the Village of Earlton and running north along the east side of the right-of-way of the Temiskaming and Northern Ontario Railway to the north boundary of the township of Armstrong; thence east along the town line between Armstrong and Evanturel, which road is above described, to the line between Lots 4 and 5, township of Evanturel, and continuing north along the said line across Concessions 1, 2 and 3 to a point on the line between Concessions 3 and 4, Evanturel, half a mile east of the Village of Heaslip, 6 miles in all. The road was cut out and graded.

*South Lorrain Road:*

From the town of Haileybury a road was partly cut out for a distance of two miles.

J. F. WHITSON,  
Road Commissioner.



THE HON. W. H. HEARST,

*Minister of Lands, Forests and Mines.*

SIR,—I beg to recommend the expenditure of the following amounts under 2 Geo. V. Chap. 2, on the construction of new roads, repairing and finishing of old roads, the construction of bridges and the clearing of a small farm for experimental purposes in Ground Hog Valley, during the season of 1914.

*District of Rainy River.*

In the Rainy River Valley, to complete and re-surface roads constructed last season, also the opening up of new roads tributary to the trunk roads constructed last season ..... \$85,000

*District of Kenora.*

Completing the trunk road north-west of the towns of Kenora and Keewatin, which was partially constructed last season, also the construction of new roads in the agricultural section north-east and north-west of Dryden and in the vicinity of Vermilion Bay ..... 35,000

*District of Port Arthur.*

Re-surfacing trunk roads graded last season, the construction of short roads adjacent to the trunk roads constructed last season, also construction of new roads in and north of the Township of Dorion on the C. P. R.... 60,000

*District West of Fort William.*

The extension of the trunk roads begun last season, re-surfacing and gravelling portions of the trunk roads partly constructed last season, including the Pigeon River or International Boundary and Duluth Road, also the construction of a bridge across the Kaministiquia River..... 90,000

*Sudbury and Sault Ste. Marie Trunk Road.*

Finishing road between Echo Bay and Blind River under construction last season, also continuing the trunk road between Blind River and Worthington ..... 90,000

*District of Sudbury.*

Re-surfacing part of the trunk roads constructed last season in the Blezard and Chelmsford Valleys, construction of new trunk roads through Blezard Valley, the completion and extension of the West Shining Tree Mining Road, the repairing of Long Lake Mining Road ..... 50,000

*Sudbury and North Bay Trunk Road.*

The construction of a trunk road from Sturgeon Falls west to Sudbury. .... 50,000

*North Bay and Mattawa Trunk Road.*

Re-surfacing part of the old road, the construction of a trunk road from Callander south to Powassan, the construction of a bridge across the Amable du Fond River on the North Bay and Mattawa Road..... 50,000

*Haileybury and South Lorrain.*

Mining and agricultural road in the South Lorrain Mining District and farming section, west of Lake Temiskaming ..... 15,000

Mining road from the Elk Lake Branch of the T. & N. O. to Maple Mountain Mining Section and other mining roads in the vicinity of Elk Lake. .... 20,000

Completing South Porcupine mining road and other mining roads on the vicinity of Porcupine ..... 20,000

Colonization roads in the vicinity of Long Lake west of Charlton, including three large bridges ..... 35,000

*Temiskaming and Northern Ontario Railway.*

Roads along the T. & N. O. Ry. from Englehart north to Cochrane and extending west as far as Charlton and Porcupine and east as far as the agricultural land extends, including the construction of a bridge on White River. .... 120,000

*Transcontinental Railway.*

Roads along the Transcontinental Railway from the Quebec boundary west to Hearst, to cover also the construction of ferries across the Abitibi and Frederick-house Rivers, to cover the completion of roads cut out last season, the construction of new roads where settlement has taken place, and the opening up of new roads where immediate settlement is likely to take place. .... 105,000

A proper survey and location of proposed trunk road along the Ottawa River from Mattawa to Pembroke ..... 15,000

*Larder Lake Mining Road.*

Repairing and extending the Larder Lake Mining Road ..... 5,000

For clearing small experimental farm in the valley of the Ground Hog River on the Transcontinental Railway, where there is a large area of rich clay soil, this with a view to testing the climatic conditions of that section of the country, to cover also the expense of making additional accurate tests of the soils in the different sections throughout the Clay Belt ..... 3,000

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Unforeseen work, exploration and surveys of new roads, renewing of old bridges and construction of new roads. ....	77,000
Office and engineering expenses, equipment and plant .....	25,000
	<hr/>
	\$950,000

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I have the honor to be, Sir,

Your obedient servant,

J. F. WHITSON,  
*Road Commissioner.*





# REPORT

OF THE

## Minister of Lands, Forests and Mines

OF THE

### PROVINCE OF ONTARIO

For the Year Ending 31st October

# 1914

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PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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TORONTO

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1915

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## CONTENTS.

Appendices:	PAGE
No. 1. Statement of Officers and Clerks in the Department .....	2
2. " Crown Lands Agents and Homestead Inspectors .....	5
3. " Lands Sold and Leased and Collections .....	7
4. " Gross Revenue .....	8
5. " Receipts Considered as Special Funds .....	9
6. " Gross Disbursements .....	10
7. " Expenditure on Account of Various Services .....	36
8. " Revenue from Woods and Forests.....	37
9. " Patents, etc., Issued .....	37
10. " Timber Cut and Amounts Accruing for Dues, etc. ....	38
11. " Work Done in Military Branch .....	40
12. " Letters Received and Mailed .....	40
13. " Locations, etc., under Free Grants Act .....	41
14. " Municipal Surveys Ordered .....	46
15. " Municipal Surveys Confirmed .....	47
16. " Crown Surveys in Progress .....	48
17. " Crown Surveys Completed .....	49
18. Surveyor's Report, Township Outlines, Districts of Algoma and Sudbury.	50
19. " " " District of Kenora .....	53
20. " " " of Pelican, Malachi and Rice, District of Kenora .....	55
21. " Township of Caithness, District of Algoma .....	58
22. " " Ebbs, District of Algoma .....	60
23. " " Lowther, District of Algoma .....	63
24. " " Orkney, District of Algoma .....	65
25. " " Scholfield, District of Algoma .....	66
26. " " Talbot, District of Algoma .....	68
27. " " Shetland, District of Algoma .....	69
28. " " Drayton, District of Kenora .....	70
29. " " Malachi, District of Kenora .....	73
30. " " Mattawan, District of Nipissing .....	76
31. " " Sterling, District of Thunder Bay ....	77
32. " " Gorham (part), District of Thunder Bay	80
33. " " Ware (part), District of Thunder Bay	82
34. " " O'Brien, District of Temiskaming ....	83
35. Supplementary List of Licensed Cullers .....	85
36. Report of Superintendent Algonquin Provincial Park .....	85
37. " " Quetico Provincial Park .....	89
38. Report of the Forestry Branch .....	93
39. Report of J. F. Whitson on Construction of Roads in Northern Ontario	104



# Report of the Minister of Lands, Forests and Mines of the Province of Ontario

For the Year Ending 31st October, 1914

*To His Honour The Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit for the information of your Honour and the Legislative Assembly a report for the fiscal year ending 31st October, 1914, of the management of the Crown Lands of the Province.

## CLERGY LANDS.

The area sold during the year was 447 acres, the value of which was \$256.50. The collection on account of Clergy Lands was \$1,367.56. (See Appendix No. 3, page 7.)

## COMMON SCHOOL LANDS.

There were no sales. The collection on account of former sales was \$4,978.03. (See Appendix No. 3, page 7.)

## GRAMMAR SCHOOL LANDS.

The area sold during the year was 25 acres, for \$43.75. The collection on account of those and former sales was \$957.91. (See Appendix No. 3, page 7.)

## UNIVERSITY LANDS.

The area of these lands sold during the year was 6,047 acres for \$3,023.50. The collection on account of these and former sales was \$2,498.74. (See Appendix No. 3, page 7.)

## CROWN LANDS.

There was sold during the year for agricultural and town site areas 137,666 acres for \$98,030.68. The collection on account of these and former sales was \$83,529.50. There was sold for mining purposes 17,383 acres for \$43,763.31. There was collected on account of these and former sales \$41,027.50.

There was leased for mining purposes 5,837 acres for \$5,837.61. There was collected on account of these leases and those of former years \$16,469.76. There was leased of Crown lands an area of 7,555 acres for \$5,749.06. There was collected on account of these and the leases of former years \$40,755.48.

The total area of Crown lands disposed of by sale and lease during the year was 174,961 acres for a value of \$156,704.41, as compared with 260,873 acres sold and leased in 1913 for \$259,956.88. The total collection on account of the sales, leases, etc., was \$191,584.48. (See Appendix No. 3, page 7.)



It will be observed that there has been a falling off in the number of sales made as well as in the receipts of money from that source. The net decrease in the number of purchases is 363. The causes of the falling off are not difficult to understand. They are attributable to the disturbance in all channels of trade, labor and finance. People found it very difficult to get money for any purpose and with the fear of what might occur those who had a few hundred dollars ahead preferred to keep them rather than to expend them in moving to a new part of the Province while matters were so unsettled. Then a considerable percentage of the young men that might have gone into newer parts have gone to fight for their King. In these and other ways it is quite easy to account for the falling off in the number of settlers who have taken up land in the newer parts of the Province. The falling off is mostly in the clay belt in Townships which have been opened for some little time. When a Township is opened for the first time there is a considerable rush of people into it which falls off when settlers have to go farther back from the railway and other highways. The Transcontinental Railway is still in the hands of the contractors.

#### FREE GRANTS.

During the year, 1,882 persons were located for Free Grant Lands, or over 300 in excess of the previous year while 301 settlers purchased land in Free Grant territory, thereby making practically 2,200 persons taking possession of Free Grant land for a total area of 268,238 acres, which is greater by 28,966 acres than the year ending October 31st, 1913.

The northern portions of the Province benefited mostly by the settlement, the District of Thunder Bay receiving no less than 632 settlers, while Rainy River and Kenora received 761. The District of Sudbury and that portion of Nipissing lying north of Lake Nipissing, showed an increase over the preceding year. Patents were issued to 767 locatees who completed their settlement duties.

The Townships of Sterling in the District of Thunder Bay and of Britton and Rowell in Kenora were opened for location under the Free Grant Section of the Public Lands Act.

#### MILITARY GRANTS.

The total number of military certificates issued to date, under the Veterans Land Grant Act, I Edward VII, Cap. 6, and amendments thereto, is 13,998.

During the year there have been 47 certificates located, making in all a total of 8,064 located.

There were 8 certificates surrendered to the Crown for the \$50.00 commutation; this makes a total of 3,234 certificates surrendered.

In 19 cases the certificates have been surrendered and applied in payment of lands purchased from the Crown making a total of 721 that have been applied in this manner.

During the year there have been 335 patents issued for lands located by veterans making a total of 6,740 thus disposed of.

The total number, therefore, of certificates that have now been redeemed is 11,945, leaving 1,879 still outstanding.

The locatees of all lands granted under this Act, must apply for their patents for such land before ten years have expired from date of location. If this applica-

tion for patent is not made within the ten years, then the land comes under the settlement regulations, and unless the settlement duties are proceeded with, the locations are liable to cancellation.

### THE MINERAL INDUSTRY.

The growth which marked the output of the mining industry of Ontario during the previous decade underwent a decided check in 1914, the value of the production being \$46,632,105, as compared with \$53,232,311 in 1913—a decrease of \$6,600,206, or 12.3 per cent. It fell below the level of 1912 by \$1,641,406, but considerably exceeded that of any preceding year. The decrease was somewhat greater in amount in the metallic than in the non-metallic products, being \$3,638,438, as compared with \$2,961,768.

The causes of this diminution were two: (1) the general depression in business which became apparent early in the year, and (2) the outbreak of hostilities in Europe.

Of gold the production was the largest in the history of the Province, 268,942 ounces, worth \$5,529,767. Much the greater part came from Porcupine, the Hollinger mine being the leading producer. The Dome, Porcupine Crown and McIntyre Porcupine mines also contributed largely. There were in all 608,200 tons of ore crushed, the average yield being \$9.14 per ton.

The output of silver in 1914 was 25,999,374 fine ounces, being a decrease, as compared with 1913, of 3,725,557 ounces, or 12.5 per cent., or 17.4 per cent. as compared with 1911, when the Cobalt mines were at their maximum and produced 31,507,791 ounces.

The return to the mining companies was \$13,209,726, an average of 50.807 cents per ounce.

The production by camps was as follows:—

	Ounces.	Value.
Cobalt proper .....	24,940,613	\$12,678,181
Casey township .....	499,643	236,298
South Lorrain .....	104,665	54,310
Gowganda .....	399,300	211,184
	<hr/>	<hr/>
Silver recovered from auriferous ores .....	25,944,221	\$13,179,973
	55,153	29,753
	<hr/>	<hr/>
Total.....	25,999,374	\$13,209,726

Since the opening of the mines at Cobalt the production of silver has amounted to over 211 million ounces, having a value of more than 111 million dollars.

Nickel was produced to the extent of 22,760 tons, and copper 14,453 tons. The source of these metals was the nickel-copper ore of the Sudbury District, of which there was raised 1,072,207 tons and smelted 947,053 tons. Some 79,825 tons of similar ore came from the Alexo mine in Dundonald township. The nickel contents of the matte were less than 1913 by 2,178 tons, and the copper contents more by 1,512 tons.

Iron ore, including concentrates, was shipped from the mines and works to the extent of 240,059 tons, valued at \$531,379.

The production of pig iron fell from 648,899 tons worth \$8,719,892 in 1913 to 556,112 tons worth \$7,041,079 in 1914. Four blast furnace plants were in operation, namely, at Sault Ste. Marie, Hamilton, Port Colborne and Deseronto.

Building materials of all kinds had a diminished output, including brick, stone, lime, Portland cement, etc. Natural gas remained at practically the same figure as in 1913, while petroleum showed a continuation of the decline which set in a number of years ago.

#### COLLECTIONS.

The total revenue of the Department from all sources was \$2,340,657.07. Of this \$83,529.50 came from agricultural lands and town sites; mining lands \$41,027.50; mining and crown leases \$57,225.24; miners' licenses, permits and recording fees \$64,195.26; royalties \$74,685.11; supplementary revenue tax \$306,861.40. From woods and forests the revenue was \$1,674,887.93, made up of the following items, bonus \$454,167.24; timber dues \$1,112,480.38; ground rent \$103,910.31; transfer fees \$4,330.00. (See Appendix No. 4, page 8.)

#### DISBURSEMENTS.

The total expenditure of the Department for ordinary services was \$596,669.32. Some of the principal items were: Agents' salaries and disbursements \$16,885.77; homestead inspectors \$11,911.29; Crown timber agents \$30,826.48; wood ranging and estimation of timber \$118,462.80; fire ranging \$150,588.05; forest reserves, fire ranging, etc., Temagami reserve \$42,137.90, Metagami reserve \$8,127.82, Mississauga reserve \$20,066.19, Nipigon reserve \$13,234.90, Eastern reserve \$2,828.85, Sibley reserve \$705.00; mines and mining \$44,153.50; mining recorders \$23,143.17; surveys \$36,496.20; refunds \$16,033.98; contingencies, lands and forests \$33,448.48, bureau of mines \$6,016.29.

There was expended under the direction of the Department the sum of \$879,780.85. Of this amount, \$802,578.19 was in connection with the northern development, under 2 Geo. V, while the other principal items were Algonquin Park \$24,782.76, Quetico Provincial Park \$11,003.18, and expenditure under Bounty Act, 7 Edward VII, cap. 14, \$41,016.72. (See Appendix Nos. 6 and 7, pages 10 to 36.)

#### WOODS AND FORESTS.

The revenue accrued due for the year ending 31st October, 1914, was \$2,009,131.43, a decrease of \$118,191.13, as compared with the accrual of last year. The revenue collected during the year from woods and forests amounted to \$1,674,887.93, a decrease of \$304,237.88 as compared with the revenue collected last year. The revenue from timber dues was \$1,112,480.38 against a collection of \$1,277,490.08 last year. The collection on account of Bonus was \$454,167.24 as against \$591,676.29 last year. The collection on account of ground was \$103,910.31 as against \$99,460.19 of last year. The revenue from transfer fees was \$4,330.00 as against \$10,500.00 last year.

#### LANDS UNDER LICENSE.

The area under license last year was 17,333 square miles, as against 17,517½ square miles last year. The area under license varies from year to year from several reasons. Areas cut-over are dropped and other areas go into what is called "abeyance," that is the ground rent not being paid the license does not



issue, or perhaps Crown timber dues are owing, in which case the license does not issue. Then the next year the ground rent or dues having been paid up the licenses are again issued and the area under license is considerably increased although no sale has taken place.

There was surrendered during the year 1,111 square miles and new licenses were issued for territory aggregating nearly 500 square miles.

#### VOLUME OF OUTPUT.

The production of pine timber, sawlogs and square timber, etc., in feet board measure during the year was 382,582,027 ft. B.M., being 22,204,839 ft. B.M. in excess of the output of last year. The output of timber other than pine this year was 77,451,857 ft. B.M. as against 64,097,436 ft. B.M. last year. The quantity of pulpwood taken off Crown Lands was 104,544 cords as against 131,424 cords last year. There were taken out 5,439,845 pieces of railway ties as against 6,355,828 pieces last year.

#### FINANCIAL STRINGENCY.

In the report last year the existence of financial stringency was referred to and the opinion was expressed that there would not be much increase in the output of logs. Financial matters did not improve, but on the contrary became worse in the sense that the war came upon us in August just when lumbermen were making arrangements for the payment of accounts for the previous season and also for advances on account of their lumber operations during the coming season. For some time after the breaking out of the war financial matters were in a state of chaos and lumbermen found it impossible to finance both their operations and the payment of their accounts for timber dues and they frankly said so. The Department has never failed to take into consideration the state of financial matters and to assist in preventing a crisis in the lumber trade by extending leniency to those indebted to it for timber dues, because the security of the limits is good. In pursuance of that policy the Department did not press for payment in full of accounts for dues, etc., consequently the collection from woods and forests has been about \$304,237.88 below the estimated revenue. It is not expected that the output for the present winter will greatly exceed that of last winter, although the financial position is somewhat improved.

#### FIRE-RANGING.

We had on duty last year directly under the supervision of the Department 606 men, distributed as follows: On forest reserves 214; Quetico and Algonquin Parks 19; railways 229; Crown lands 106; chief rangers 26; deputy chief rangers 4; supervising rangers on licensed territory 8. On lands under license there were 320 rangers on duty. These rangers are selected by the licensees, subject to the approval of the Department which has power to refuse to appoint or remove after appointment if the person recommended is not of good character or neglects his duties. The recommendations are left with the licensees because they have their lumbermen, foremen and others who are familiar with the topography of their limits and know where settlers are and generally the danger points which require close watching. The licensees have to pay their own rangers and any expense caused by the fighting of forest fires on their limits. The Department puts on supervising rangers—8 in number—on the licensed territory for the purpose of

seeing that the lumberers' rangers are on duty and that all limits are properly protected. If the licensees neglect to put on the necessary rangers the Department puts them on and charges the remuneration and expense against the limit, withholding the license until the indebtedness is paid. The supervising rangers—8 in number—are paid by the Department in the first place, but the expense and wages are collected from the licensees pro rata, according to the miles under license to each.

Several fires occurred last year. A few in the Mississaga Forest Reserve, which necessitated the sale of some timber berths in order that the timber should be cut during the present season. There was also a serious fire in the Algonquin Park which was extinguished with difficulty and not until considerable timber was damaged. This timber was offered for sale but owing to the depression in the timber trade no bids were obtained. On the whole, however, the fires on lands of the Crown were not serious and except as above stated, no losses were incurred. There were several fires on licensed territory, notably in the Townships of Parkin, Goschen and Montgomery. In all these cases the licensees made preparations to cut the damaged timber and it will not come out this winter. The Georgian Bay Lumber Company lost their camps and supplies. Altogether, their loss of \$10,000.00 was entailed by the carelessness of someone.

#### FOREST RESERVES.

Temagami forest reserve contains an area of 6,000 miles. It has had the usual staff of firerangers in it during the past year and no fires have taken place.

Mississaga forest reserve is tributary to a river of the same name. The original area of this reserve was 3,000 miles, but last year there was added to it 1,896 miles, so that it now contains an area of 4,896 miles. One or two fires occurred in the reserve during the past year, which are referred to under the heading of fireranging.

Nipigon forest reserve contains an area of 7,300 miles. It surrounds Lake Nipigon, a large lake. While it does not contain a great quantity of pine there is considerable pine in it and an enormous quantity of pulp timber, spruce, etc. There were no fires in this reserve during the past year.

What was called the Quetico reserve in Rainy Lake District contains an area of 1,500 miles, and has a large quantity of pine timber in it. It is now changed into a park, and is known as the Quetico Provincial Park.

The Eastern forest reserve is situated in the County of Addington and has an area of 100 square miles. There were no fires in this reserve during the past year.

Sibley reserve contains an area of 70 miles and is preserved principally to keep the promontory called "Thunder Cape" covered with timber. There were no fires in this reserve during the past year.

Algonquin National Park contains an area of 2,741 square miles. There was one serious fire in it during the past summer.

#### RAILWAYS.

There was a staff of firerangers on the Transcontinental, the T. & N. O., the Canadian Northern and the Algoma Central. No serious fires occurred except in the Algonquin Park already referred to, and greater care is being exercised from year to year to prevent the spread of forest fires from railways.

The Department endeavored to obtain this year the percentage of fires that took place—small and great—the number that were suppressed by rangers and the causes of the fires. Our reports indicate that altogether there were 2,296 fires occurred during the season. Of this number 2,266 did no damage to timber. Of the total number 2,181 were reported by rangers patrolling railway lines—nearly all the fires being extinguished before they had a chance to spread. Of the causes of the fires 69 per cent. is ascribed to railway engines and railways; 7 per cent. to settlers; 7 per cent. to campers, hunters, fishers and careless smokers, and 17 per cent. to causes which were not ascertained.

There was from one million and a half to two million feet of pine damaged, together with considerable quantities of young pine, birch, spruce and basswood.

On the lands under license, 91 fires were reported: 69 per cent. of which did little or no damage. Ten per cent. of these were said to be caused by railways; 30 per cent. by settlers; 26 per cent. cause unknown, and there were a number of individual fires caused by fishers, section men, careless smokers and others. Only 15 or 20 fires went over areas exceeding 10 acres.

The cost of patrol of forest reserves was \$84,148.59; on railways and Crown lands \$148,079.28. The cost of extinguishing fires in forest reserves was \$2,952.07; on railways and Crown lands \$2,508.77. There are, as already stated, 325 rangers on licensed lands, the estimated cost of which would be approximately \$85,000.

#### CULLERS' EXAMINATIONS.

Only one cullers' examination was held during the past year, viz., at North Bay. Only seven candidates were successful at this examination, and these were duly granted certificates authorizing them to act as cullers.

(For a list of cullers who passed at this examination see Appendix 35, page 85.)

(For a complete list of licensed cullers see Minister's reports for 1911, 1912 and 1913.)

#### CROWN SURVEYS.

The following Crown Surveys have been concluded this year:

Township outlines in the Districts of Algoma and Sudbury.

Township of Scholfield, in the District of Algoma.

Township of Lowther, in the District of Algoma.

Township of Caithness, in the District of Algoma.

Township of Orkney, in the District of Algoma.

Township of Ebbs, in the District of Algoma.

Township of Shetland, in the District of Algoma.

Township of Talbot, in the District of Algoma.

Township of O'Brien, in the District of Timiskaming.

Part of the Township of Mattawan, District of Nipissing.

Township of Stirling, in the District of Thunder Bay.

Part of the Township of Ware, District of Thunder Bay.

Part of the Township of Gorham, District of Thunder Bay.

Township of Drayton, District of Kenora.

Township outlines, District of Kenora.

Township of Malachi, District of Kenora.

Township outlines, District of Kenora.



## INSTRUCTIONS WERE GIVEN FOR THE FOLLOWING SURVEYS.

Timber berths in the District of Kenora.

Township of Redvers, District of Kenora.

Part of the Township of Fraleigh, District of Thunder Bay.

Township of Upsala, District of Thunder Bay.

Survey in the Township of Beaumont, District of Sudbury.

Survey in the Mississauga forest reserve, District of Algoma.

Verification survey in the Township of Matchedash in the County of Simcoe, and Baxter and Wood, District of Muskoka.

Reports of the surveys so far as received and examined will be found in appendices 16 to 34 inclusive, pages 48 to 85.

## MUNICIPAL SURVEYS.

On the petition of the Municipal Council of the Town of Oakville, instructions were issued to survey the boundaries or limits of certain parts of the following public highways in the Town of Oakville, namely, Dundas Street from the north-west limit of Sumner Street to the south-easterly limit of the right of way lands of the Grand Trunk Railway Company, and the "6th line road" from the westerly limit of Dundas Street aforesaid to the said right of way lands of the Grand Trunk Railway Company, and to fix the boundaries or limits thereof by durable monuments, to mark the proper lines of the above streets and roads.

Also on the petition of the Municipal Council of the City of Hamilton, instructions were issued to define the limits of Burlington Street in the City of Hamilton by durable monuments planted at the intersections of the base line or Burlington Street with James Street, Hughson Street, John Street, Catharine Street, Mary Street and Ferguson Avenue.

Also on the petition of the Municipal Council of the City of Port Arthur, instructions were issued to survey certain streets in the City of Port Arthur in the District of Thunder Bay, including North and South Water Streets, Cumberland Street, Court Street, and Algoma Street and all intersecting streets between John Street and McVicar Street, and to have the corners of the streets marked by iron bars duly planted thereat.

Also on the petition of the Municipality of Wolfe Island in the County of Frontenac, instructions were issued to survey the road allowance between the 3rd and 4th concessions south of the base line in the township of Wolfe Island in the County of Frontenac, across lots 8, 9 and 10, or as much farther on either side as may be necessary to find an original post and to plant durable monuments at the angles of the above lots.

Also on the petition of the Municipal Council of the town of Port Credit, instructions were issued to survey part of the town plot of Port Credit in the County of Peel, lying south-west of the River Credit and north-east of Joseph Street in the said village and to plant stone or other durable monuments at the front and rear angles of the blocks lying in that part of the village, as shown on annexed plan, pursuant to the provisions of the Surveys Act.

Also on the petition of the Municipal Council of the township of Ross, instructions were issued to survey the road allowance between concessions two and three, in the Township of Ross, from the proof line between lots ten and eleven south-easterly to Olmstead Lake, and to mark said road allowance by permanent monuments.

The following Municipal Surveys have been confirmed under the provisions of the Revised Statutes of Ontario, 1897, Chapter 181, Sections 14 and 15, such surveys being final and conclusive.

Survey of the boundary road allowance between the townships of Osnabruck and Cornwall and to have the said boundary marked by permanent stone or iron monuments at the expense of the municipality of the township of Osnabruck, in the County of Stormont.

Also the survey of the boundaries or limits of certain parts of the following public highways in the town of Oakville, namely, Dundas Street from the north-west limit of Sumner Street to the south-easterly limit of the right of way lands of the Grand Trunk Railway Company, and the "6th line road" from the westerly limit of Dundas Street aforesaid to the said right of way lands of the Grand Trunk Railway Company, and to fix the boundaries or limits thereof by durable monuments, to mark the proper lines of the above streets and roads.

Also the survey defining the limits of Burlington Street in the City of Hamilton by durable monuments planted at the intersections of the base line or Burlington Street with James Street, Hughson Street, John Street, Catharine Street, Mary Street and Ferguson Avenue.

Particulars relating to these surveys will be found in appendices 14 and 15, pages 46 and 47.

W. H. HEARST,  
Minister.

Department of Lands, Forests and Mines,  
Toronto, October 31st, 1914.

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# APPENDICES

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Bureau of Mines	B. Rushford .....	Draughtsman .....	1912, Oct. 5.....	1,000 00
	M. H. Kirkland .....	Stenographer .....	1904, Nov. 23.....	725 00
	E. G. Halliday .....	do .....	1909, March 24.....	725 00
	E. C. Arner .....	do .....	1911, March 3.....	625 00
	B. Benson .....	do .....	1911, March 3.....	625 00
Forestry .....	C. O'Connor .....	do .....	1911, March 3.....	625 00
	C. S. Jones .....	Chief Clerk .....	1890, May 22.....	2,050 00
	C. E. Burns .....	Clerk .....	1900, April 9.....	1,450 00
	W. S. Sutherland .....	do .....	1902, Jan. 13.....	1,350 00
	W. Carrell .....	do .....	1904, Jan. 15.....	1,250 00
Accounts .....	A. E. Robillard .....	do .....	1894, May 8.....	1,000 00
	A. E. Roe .....	do .....	1909, March 24.....	1,250 00
	J. A. G. Crozier .....	Chief Clerk .....	1867, Dec. 1.....	2,300 00
	J. B. Cook .....	Clerk .....	1898, Aug. 1.....	1,750 00
	H. Gillard .....	do .....	1900, April 9.....	1,500 00
Woods and Forests .....	F. J. Niven .....	do .....	1903, March 6.....	1,350 00
	W. F. Trivett .....	do .....	1904, Jan. 13.....	1,300 00
	R. H. Hodgson .....	do .....	1904, Nov. 23.....	1,200 00
	J. Houser .....	do .....	1907, March 13.....	1,400 00
	A. H. O'Neill .....	do .....	1909, March 24.....	1,000 00
Accounts .....	G. W. Harris .....	do .....	1909, March 24.....	1,000 00
	N. L. Rogers .....	do .....	1911, Nov. 1.....	950 00
	S. D. Meeking .....	do .....	1910, June 1.....	900 00
	A. P. Saunders .....	do .....	1913, April 30.....	850 00
	Amy Thompson .....	Stenographer .....	1909, March 24.....	775 00
Accounts .....	M. E. Bliss .....	do .....	1909, Sept. 1.....	700 00
	D. G. Ross .....	Accountant .....	1861, April 15.....	2,550 00
	H. M. Lount .....	Clerk .....	1904, Jan. 13.....	1,550 00
	C. J. Clarke .....	do .....	1907, March 13.....	1,150 00
	R. Gordon .....	do .....	1913, April 30.....	850 00
Forestry .....	C. Bowland .....	Clerk and Stenographer .....	1911, March 3.....	700 00
	F. Yeigh .....	Registrar .....	1880, March 1.....	1,600 00
	Chester Dies .....	Clerk .....	1907, March 13.....	1,250 00
	E. J. Zavitz .....	Director .....	1912, Nov. 7.....	2,600 00
	F. S. Newman .....	Assistant Director .....	1913, Sept. 22.....	1,600 00
Bureau of Mines	Julia Bald .....	Stenographer .....	1914, Oct. 28.....	600 00
	Thos. W. Gibson .....	Deputy Minister .....	1891, June 19.....	4,000 00
	R. D. Fisher .....	Secretary .....	1907, March 13.....	1,350 00



## Appendix No. 1.—Concluded.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1914.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
Bureau of Mines	W. H. Morris	Clerk	1906, Jan. 1.....	\$ 1,150 00	Transferred to Mining Commissioner's Office, Oct. 9th, 1914.
	W. Lemoine	do	1908, April 8.....	1,150 00	
	A. Burritt	do	1908, April 8.....	1,150 00	
	D. H. Barr	do	1907, March 13....	1,150 00	
	Anne Moffatt	do	1901, March 1.....	1,100 00	
	A. G. Scovell	do	1909, March 24....	1,050 00	
	C. W. St. John	do	1910, April 14.....	1,000 00	
	Ethel Craig	Clerk and Stenographer....	1906, May 16.....	800 00	
	Flossie McDougall	do	1907, March 13....	725 00	
	J. L. McNaughton	Stenographer	1909, March 24....	750 00	
	H. W. Batchelor	do	1911, Dec. 19.....	650 00	
	H. Brophy	Messenger	1898, Oct. 1.....	925 00	

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,

Deputy Minister of Lands and Forests.

## Appendix No. 2.

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1914.

Name.	Post office address	District or county.	Date of appointment.	Salary per annum.	Remarks.
Anderson, T. V.	Hearst.	Part District of Algoma.	1913, May 9.	\$ 500 00	
Baker, R. H.	Minden.	Part of Victoria	1907, Oct. 1.	350 00	
Barr, Jas.	Fort Frances.	Homestead Inspector	1906, Nov. 23.	1,200 00	
Bastien, J. A.	Chelmsford.	Homestead Inspector	1913, May 2.	600 00	
Bolger, J. W.	New Liskeard.	Lake Temiskaming District of Nipissing.	1913, July 17.	700 00	
Both, Chas.	Denbigh.	Part of Frontenac and Addington.	1905, Oct. 20.	200 00	
Brown, J. B.	Bracebridge.	Homestead Inspector and Crown Land Agent	1905, July 28.	1,000 00	
Eyers, R. J.	Massey.	Part District of Sudbury.	1905, July 3.	500 00	
Buchanan, T.	Thessalon.	do do Algoma	1901, Nov. 30.	300 00	
Burrows, W. A.	Port Arthur.	do do Thunder Bay	1912, Jan. 30.	700 00	
Burnes, C. W.	Sundridge.	Homestead Inspector	1905, Nov. 15.	900 00	
Cameron, Wm.	Stratton Station.	Part District of Rainy River.	1911, April 27.	500 00	
Campbell, I. M.	Parry Sound.	do do Parry Sound	1914, Nov. 15.	500 00	
Cragg, W. V.	New Liskeard.	Homestead Inspector	1913, April 1.	1,200 00	
Dean, Thos.	Sault Ste Marie.	do do	1908, July 29.	600 00	
Dempsey, S. J.	Cochrane.	Part of District of Nipissing	1911, Feb. 1.	600 00	
Douglas, W. J.	Greenview.	do Hastings	1912, June 1.	500 00	
Ellis, H. J.	Powassan.	do District of Parry Sound	1909, May 20.	500 00	
Freeborn, Dr. J. S.	Magnetawan.	do do do	1905, Nov. 10.	500 00	
Ginn, F. E.	Matheson.	do do Nipissing	1912, March 20.	600 00	
Hales, W.	Apsley.	do County of Peterboro	1911, July 17.	250 00	
Hayes, G.	Dryden.	District of Rainy River	1914, June 1.	500 00	
Hollands, C. J.	Fort Frances.	Part Township of Alberta and part District of Rainy River	1892, Oct. 12.	300 00	
Hughes, Murillo.	Murillo.	Homestead Inspector	1908, July 20.	800 00	
Jenkin, Wm.	Emisdale.	Part of District of Parry Sound.	1908, July 29.	500 00	
Langlois, E.	Warren.	do do Sudbury	1911, April 4.	500 00	
Lemieux, J. A.	Bleazard Valley.	do do do	1908, July 1.	400 00	
MacLennan, J. K.	Sudbury.	do do do	1905, July 3.	500 00	
McFayden, A.	Emo.	do do Rainy River	1905, Sept. 8.	500 00	

*Appendix No. 2.—Concluded.*

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1914.—*Concluded.*

Name.	Post office address	District or county.	Date of appointment.	Salary per annum.	Remarks.
Mulvaney, N.....	Espanola Station.	Part of District of Algoma .....	1912, June 1..	\$ c. 200 00	Resigned Aug. 31st, 1914.
Noble, E.....	Sault Ste. Marie	do do .....	1913, Feb. 1..	300 00	
Parsons, W. J.....	North Bay.....	do do Nipissing .....	1908, April 8.	500 00	
Phillon, J. A.....	Sturgeon Falls..	do do do .....	1907, Sept. 13.	500 00	
Powell, F. R.....	Parry Sound....	do do Parry Sound .....	1907, May 31.	500 00	Resigned March 31st, 1914.
Prince, A.....	Wilno.....	do Renfrew .....	1905, July 12.	500 00	
Pronger, R. H.....	Dryden.....	District of Rainy River .....	1906, May 7..	500 00	Resigned June 1st, 1914.
Quenneville, L.....	Sturgeon Falls..	Homestead Inspector .....	1906, May 7..	600 00	
Small, R.....	Mattawa.....	Part District of Nipissing .....	1910, June 30.	500 00	
Smith, Dalton.....	Cochrane.....	Homestead Inspector .....	1912, April 16	1,000 00	
Spry, W. L.....	Kenora.....	Part District of Rainy River .....	1909, Sept. 21	400 00	Also Mining Recorder.
Watson, T. P.....	Englehart.....	Homestead Inspector .....	1905, May 10.	1,000 00	
Watt, F.....	Pembroke.....	Part of Renfrew .....	1913, May 28.	300 00	
Wilson, James.....	Kinmount.....	do Peterboro .....	1905, May 31.	175 00	
Whybourne, W. E..	Marksville.....	do St. Joseph Island .....	1905, April 7.	250 00	
Woolings, J.....	Englehart.....	do District of Nipissing .....	1908, June 30.	600 00	

D. GEO. ROSS,

Accountant.

AUBREY WHITE,

Deputy Minister of Lands and Forests



Appendix No. 3.

Statement of Lands Sold and Leased. Amount of Sales and Leases and Amount of Collections for the year ending October 31st, 1914.

Service.	Acres sold and leased.	Amount of sales and leases.	Collection on sales and leases.
<i>Lands Sold:</i>		\$ c.	\$ c.
Agricultural and Townsites.....	137,666.06	98,030 68	83,529 50
Mining .....	17,383.53	43,763 31	41,027 50
Clergy.....	447	256 50	1,367 56
Common School .....	.....	.....	4,978 03
Grammar School .....	25	43 75	957 91
University .....	6,047	3,023 50	2,498 74
<i>Lands Leased:</i>			
Mining .....	5,837.61	5,837 61	16,469 76
Crown .....	7,555.22	5,749 06	40,755 48
	174,961.42	\$156,704 41	\$191,584 48

D. GEO. ROSS,  
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Deputy Minister of Lands and Forests.

*Appendix No. 4.*

Statement of Revenue of the Department of Lands, Forests and Mines for the year  
ending October 31st, 1914.

Service.	\$ c.	\$ c.	\$ c.
<b>LAND COLLECTIONS.</b>			
<i>Crown Lands:</i>			
Agricultural .....	81,418 82		
Townsites .....	2,110 68	83,529 50	
Mining .....		41,027 50	
		124,557 00	
Clergy Lands .....	1,367 56		
Common School Lands .....	4,978 03		
Grammar School Lands .....	957 91		
University Lands .....	2,498 74	9,802 24	
<i>Rent:</i>			
Mining Leases .....	16,469 76		
Crown Leases .....	40,755 48	57,225 24	
Miners' Licenses .....	34,160 55		
Permits .....	860 00		
Recording Fees .....	29,174 71	64,195 26	
Royalties .....		74,685 11	
<i>Supplementary Revenue:</i>			
Acreage Tax .....	10,046 41		
Profit Tax .....	272,610 89		
Gas Tax .....	24,204 10	306,861 40	
			637,326 25
<b>WOODS AND FORESTS.</b>			
Bonus .....		454,167 24	
Timber Dues .....		1,112,480 38	
Ground Rent .....		103,910 81	
Transfer Fees .....		4,330 00	1,674,887 93
Provincial Assay Fees .....	361 52		
Casual Fees .....	755 68		
Cullers' Fees .....	116 15	1,233 35	
Algonquin Park .....	4,831 28		
Quetico Provincial Park .....	254 84		
Forest Reserves .....	730 50	5,816 62	
			7,049 97
<b>REFUNDS.</b>			
Fire Ranging .....		18,437 47	
Wood Ranging .....		2,421 00	
Estimating Timber Berths .....		350 00	
Agents' Salaries .....		88 50	
Mining Recorders .....		62 00	
Surveys .....		23 94	
Bureau of Mines .....		6 00	
Northern Development .....		4 01	21,392 92
			\$2,340,657 07

D. GEO. ROSS,  
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Deputy Minister of Lands and Forests.

*Appendix No. 5.*

Statement of Receipts of the Department of Lands, Forests and Mines for the year ending October 31st, 1914, which are considered as Special Funds.

Service.	\$ c.	\$ c.
<i>Clergy Lands.</i>		
Principal.....	878 00	
Interest.....	489 56	
		1,367 56
<i>Common School Lands.</i>		
Principal.....	1,842 23	
Interest.....	3,135 80	
		4,978 03
<i>Grammar School Lands.</i>		
Principal.....	536 43	
Interest.....	421 48	
		957 91
<i>University Lands.</i>		
Principal.....	2,240 83	
Interest.....	257 91	
		2,498 74
		<u>\$9,802 24</u>

D. GEO. ROSS,  
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*Appendix No. 6.*

Statement of Disbursements of the Department of Lands, Forests and Mines for the year ending October 31st, 1914.

Service.	\$ c.	\$ c.	\$ c.
AGENTS' SALARIES AND DISBURSEMENTS.			
<i>Land, \$16,885.77.</i>			
Anderson, T. V. ....	500 00		
Disbursements .....	17 26	517 26	
Baker, R. H. ....	350 00		
Disbursements .....	4 25	354 25	
Both, C. ....		158 33	
Bolger, J. W. ....	632 59		
Disbursements .....	74 62	707 21	
Brown, J. B. ....	966 67		
Disbursements .....	303 15	1,269 82	
Buchanan, T. ....		300 00	
Burrows, W. A. ....	650 00		
Disbursements .....	106 65	756 65	
Byers, R. J. ....	500 00		
Disbursements .....	5 14	505 14	
Cameron, W. ....	500 00		
Disbursements .....	56 55	556 55	
Campbell, Miss I. M. ....	291 67		
Disbursements .....	22 00	313 67	
Dempsey, S. J. ....	600 00		
Disbursements .....	33 40	633 40	
Douglas, W. J. ....	500 00		
Disbursements .....	23 50	523 50	
Ellis, H. J. ....		500 00	
Freeborn, Dr. J. S. ....	500 00		
Disbursements .....	14 35	514 35	
Ginn, F. E. ....	600 00		
Disbursements .....	94 05	694 05	
Hales, W. ....		250 00	
Hayes, G. ....		208 34	
Hollands, C. J. ....		300 00	
Jenkin, W. ....	500 00		
Disbursements .....	8 32	508 32	
Langlois, E. ....	500 00		
Disbursements .....	7 20	507 20	
Lemieux, J. A. ....		400 00	
MacLennan, J. K. ....	500 00		
Disbursements .....	42 15	542 15	
Brought forward .....		11,020 19	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		11,020 19	
<b>AGENTS' SALARIES AND DISBURSEMENTS.—Continued</b>			
<i>Land.—Concluded.</i>			
McFayden, A. ....	500 00		
Disbursements .....	89 44	589 44	
Mulvaney, N. ....	133 33		
Disbursements .....	8 65	141 98	
Noble, E. ....		300 00	
Parsons, W. J. ....	500 00		
Disbursements .....	17 50	517 50	
Phillion, J. A. ....	500 00		
Disbursements .....	19 57	519 57	
Powell, F. R. ....	208 33		
Disbursements .....	8 50	216 83	
Prince, A. ....	500 00		
Disbursements .....	15 50	515 50	
Pronger, R. H. ....	250 00		
Disbursements .....	43 80	293 80	
Small, R. ....	500 00		
Disbursements .....	15 75	515 75	
Spry, W. L. ....	400 00		
Disbursements .....	443 50	843 50	
Watt, F. ....		300 00	
Whybourne, W. E. ....	250 00		
Disbursements .....	9 95	259 95	
Wilson, J. ....	175 00		
Disbursements .....	13 51	188 51	
Woollings, J. ....	600 00		
Disbursements .....	63 25	663 25	
<i>Homestead Inspectors, \$11,911.29.</i>			
Barr, J. ....	1,200 00		
Disbursements .....	1,211 80	2,411 80	
Bastien, J. A. ....	600 00		
Disbursements .....	318 10	918 10	
Burnes, C. W. ....	900 00		
Disbursements .....	480 06	1,380 06	
Cragg, W. V. ....	1,200 00		
Disbursements .....	385 48	1,585 48	
Dean, T. ....	600 00		
Disbursements .....	27 90	627 90	
<i>Carried forward</i> .....		23,809 11	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		23,809 11	
<i>AGENTS' SALARIES AND DISBURSEMENTS.—Continued</i>			
<i>Homestead Inspectors.—Concluded.</i>			
Hughes, T. ....	800 00		
Disbursements .....	529 20	1,329 20	
Quenneville, I. ....	600 00		
Disbursements .....	150 20	750 20	
Smith, D. ....	1,000 00		
Disbursements .....	440 75	1,440 75	
Watson, T. P. ....	1,000 00		
Disbursements .....	467 00	1,467 80	
<i>Timber, \$30,826.48.</i>			
Bremner, G. ....	1,241 66		
Disbursements .....	334 65	1,576 31	
Christie, W. P. ....	1,600 00		
Disbursements .....	372 19	1,972 19	
Hawkins, S. J. ....	1,500 00		
Disbursements .....	433 13	1,933 13	
Henderson, C. ....	1,800 00		
Webster, W. A., Assistant .....	1,600 00		
Disbursements .....	512 87	3,912 87	
Johnson, S. M. ....	1,600 00		
Disbursements .....	205 03	1,805 03	
MacDonald, S. C. ....	1,600 00		
Disbursements .....	263 35	1,863 35	
Margach, W. ....	1,600 00		
Legris, J., Assistant .....	1,300 00		
Disbursements .....	2,083 47	4,983 47	
Maughan, J. ....	1,500 00		
Disbursements .....	432 59	1,932 59	
McDonald, H. ....	1,500 00		
Disbursements .....	400 68	1,900 68	
McDougall, J. T. ....	1,600 00		
Disbursements .....	464 29	2,064 29	
Oliver, J. A. ....	1,500 00		
Penfold, G. S., Clerk .....	800 00		
Disbursements .....	603 67	2,903 67	
Stevenson, A. ....	1,500 00		
Disbursements .....	696 00	2,196 00	
Watts, G. ....	1,500 00		
Disbursements .....	282 90	1,782 90	
<i>Carried forward</i> .....		59,623 54	



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		59,623 54	
<b>AGENTS' SALARIES AND DISBURSEMENTS.—<i>Concluded</i></b>			
<i>Miscellaneous, \$2,707.60.</i>			
Alcock, G. H., Inspecting Lots in Township Melick .....		21 00	
Ames, D. H., Caretaker Islands in Dog and Laboria Lakes .....		20 00	
Bilton, G., Caretaker Islands in North and South Crosby .....		25 00	
Guthrie, W., Caretaker Islands in Devil's Lake .....		25 00	
Galbraith, W., Inspecting Island of Ketura in Lake Muskoka .....		19 50	
Margach, J. A., Inspecting Location LK16 .....		13 95	
Moran, A., Inspecting Lots in Township of Burns .....		415 00	
McArthur, T. A., Inspector of Agencies .....	600 00		
Disbursements .....	521 65		
		1,121 65	
Stewart, J. A., Inspection of Townships Marquis, Otto, Pacaud and Evelyn .....		685 45	
Wigle, R. G., Inspecting various Lots .....		361 05	
			62,331 14
<b>OTTAWA AGENCY.</b>			
Darby, E. J., Agent .....		1,500 00	
Larose, S. C., Clerk .....		1,000 00	
Rent .....	508 33		
Disbursements .....	103 04		
		611 37	
<b>WOOD RANGING.</b>			
			3,111 37
Allan, Geo. ....		114 00	
Allen, R. A. ....		840 00	
Ansley, W. E. ....		855 00	
Arnill, Wm. ....		1,080 00	
Atcheson, Ira M. ....		570 00	
Bailey, S. I. ....	1,481 25		
Disbursements .....	137 90		
		1,619 15	
Barrett, Thos. ....		910 00	
Bates, R. ....		620 00	
Bedard, L. ....		129 00	
Beddome, W. E. ....		512 00	
Binnie, T. ....		736 00	
Bliss, L. E. ....	910 00		
Disbursements .....	808 26		
		1,718 26	
Boland, A. G. ....	910 00		
Disbursements .....	264 89		
		1,174 89	
Boyer, Geo. ....		81 00	
Buchanan, R. ....		191 25	
Buie, D. ....		622 73	
Buisson, Wm. ....		665 00	
Butterfield, J. ....		468 75	
Callaghan, T. ....		664 00	
Cameron, R. ....		408 00	
Cameron, J. ....		891 25	
Campbell, John ....		415 00	
Carlson, C. ....		65 00	
Carmichael, S. ....		177 00	
		15,527 28	
<i>Carried forward</i> .....			65,442 51

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		15,527 28	65,442 51
<i>WOOD RANGING.—Continued.</i>			
Carnfel, D. ....		324 75	
Carter, G. ....		516 00	
Castonguay, A. C. ....		975 00	
Caswell, G. ....		207 00	
Charette, H. ....		456 00	
Chenier, D. A. ....		995 00	
Christie, W. P. .... Disbursements.		12 85	
Clark, W. R. ....		560 00	
Cloud, Wm. ....		369 00	
Comer, B. F. ....		496 00	
Conture, Dan. ....		156 00	
Corrigan, R. T. ....		1,050 00	
Coones, R. ....		331 00	
Coyne, Phin. ....		770 00	
Cross, R. J. ....		516 00	
Currie, J. E. ....		156 00	
Didier, H. ....		1,235 00	
Dougherty, J. M. ....		60 00	
Durrell, Wm. ....		1,230 00	
Duval, C. A. ....		715 00	
Eaton, C. ....		232 50	
Eaton, L. ....		190 50	
Edye, W. K. ....		448 00	
Elliott, Wm. ....		516 25	
Fairbairn, N. H. ....		44 00	
Faulkner, J. ....		455 00	
Faulkner, W. ....		296 00	
Ferguson, E. A. ....		1,040 00	
Fiddes, J. ....		328 00	
Fisher, Geo. ....		1,019 00	
Fraser, W. A. ....		905 00	
Fraser, D. ....		865 00	
Fraser, T. ....		120 00	
Frechette, O. ....	1,040 25		
Disbursements	75 90		
		1,116 15	
Frechette, E. ....		344 25	
Gamey, W. H. ....		695 00	
Gill, C. ....	676 00		
Disbursements	18 25		
		694 25	
Gilligan, E. ....		1,550 00	
Gordon, J. B. ....		45 00	
Gravelle, F. ....		312 75	
Griffith, Thos. .... Disbursements		158 15	
Hagan, E. G. ....		630 00	
Harkins, J. J. ....		352 00	
Hartley, Chas. ....		1,090 00	
Henderson, Chas. .... Disbursements.		1,499 01	
Henderson, A. ....		972 25	
Hey, Ben. ....		392 00	
Huckson, A. H. ....	645 00		
Disbursements	117 81		
		762 81	
Hurdman, W. H. ....		350 00	
Hutton, John ....		1,095 00	
Irving, E. ....		504 00	
Jean, A. ....		381 00	
Johnston, T. ....		1,224 00	
<i>Carried forward</i> .....		47,284 75	65,442 51

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		47,284 75	65,442 51
<i>WOOD RANGING.—Continued.</i>			
Kay, A. ....		296 00	
Kearney, D. ....		102 00	
Kelly, F. ....		55 00	
Lamore, P. ....		172 50	
Leblanc, O. ....		300 00	
Leblanc, E. ....		419 25	
Lee, J. B. ....		925 00	
Leroy, L. H. ....		240 00	
Linklater, John .....		125 00	
Lockhart, W. H. ....		32 50	
Long, H. E. ....		910 00	
Lowe, W. C. ....		360 00	
MacDonald, S. C. .... Disbursements .....		16 04	
Macdonell, R. D. ....		745 00	
Manice, Wm. ....		1,090 00	
Mann, John .... Disbursements .....		500 00	
Margach, Wm. .... Disbursements .....		846 75	
Margach, J. A. ....	961 00		
Disbursements .....	56 75		
		1,017 75	
Marr, H. S. ....		576 00	
Martin, E. ....		444 00	
Maughan, J. .... Disbursements .....		29 40	
Menzies, A. ....		1,565 00	
Merchant, J. ....		294 00	
Milway, J. H. ....		1,560 00	
Misservia, T. ....		56 25	
Molyneaux, G. ....		725 00	
Montroy, J. J. ....		28 00	
Mooney, L. ....	1,792 00		
Disbursements .....	353 13		
		2,145 13	
Moran, A. ....		230 00	
Morel, H., Jr. ....		767 00	
Morin, D. ....		180 00	
Mulligan, J. ....		111 00	
Murphy, P. ....		111 00	
Murray, Wm. ....		1,520 00	
McAuley, W. D. ....		706 73	
McCaw, J. G. ....		1,560 00	
McDonald, J. D. ....	1,605 00		
Disbursements .....	29 55		
		1,634 55	
McDonald, T. ....	1,494 00		
Disbursements .....	17 55		
		1,511 55	
McDonald, H. .... Disbursements .....		737 57	
McDougall, J. T. .... Disbursements .....		268 33	
McGregor, C. F. ....		635 00	
McGregor, Wm. ....		555 00	
McGillivray, D. D. ....		280 00	
McIvor, J. A. ....		936 00	
McIntyre, Robt. ....		75 00	
McInnis, A. D. ....	1,491 25		
Disbursements .....	36 90		
		1,528 15	
McKendry, W. B. ....		825 00	
McKenley, J. H. ....		345 00	
<i>Carried forward</i> .....		77,377 20	65,442 51



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		77,377 20	65,442 51
<i>WOOD RANGING.—Continued.</i>			
McLean, J. ....	670 00		
Disbursements .....	102 95		
		772 95	
McLean, J. D. ....	366 00		
Disbursements .....	4 85		
		370 85	
McLaughlin, John .....		468 00	
McNabb, A. ....		1,040 00	
McPherson, J. S. ....		1,360 00	
McRae D. A. ....		573 00	
Nevison, W. H. ....		648 00	
Newburn, Wm. ....		645 00	
Niblett, Jas. ....		420 00	
Nicholas, D. G. ....		376 00	
Norgate, C. ....		496 00	
Oldscamp, Geo. ....		123 00	
Oliver, J. A. ....	Disbursements ..	393 73	
Paul, C. A. ....		705 92	
Pigott, J. ....		840 00	
Pritchard, F. ....		243 25	
Purdy, John ....		405 00	
Reid, J. P. ....		210 00	
Revell, L. O. ....		1,555 00	
Ridley, Robt. ....		1,450 00	
Ritchie, J. F. ....		775 00	
Ritchie, A. W. ....		280 00	
Ross, S. ....		1,519 00	
Roy, O. ....		273 75	
Rusk, O. ....	880 00		
Disbursements .....	84 66		
		964 66	
Sanderson, D. ....		760 00	
Schroeder, F. ....		165 00	
Sharpe, Jas. ....		1,645 00	
Shaw, Alfred ....		950 00	
Shaw, D. ....		528 00	
Shields, F. ....		468 00	
Short, J. ....		384 00	
Simmons, A. G. ....		616 00	
Simpson, Wm. ....		1,320 00	
Smith, V. ....		94 50	
Smith, H. B. ....	145 00		
Disbursements .....	22 50		
		167 50	
Spaniel, A. ....		217 50	
Sparling, S. W. ....		412 00	
Spence, D. ....		835 00	
Spence, A. ....		55 00	
Stein, Paul ....		1,023 27	
Stewart, R. ....		575 00	
St. Laurent, J. ....		288 75	
Teasdale, J. ....		555 00	
Thompson, G. S. ....		300 00	
Thompson, W. B. ....	700 00		
Disbursements .....	176 95		
		876 95	
Thompson, J. ....		207 00	
Thorpe, T. ....		715 00	
<i>Carried forward</i> .....		107,443 78	65,442 51

## Appendix No. 6.—Continued.

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		107,443 78	65,442 51
<i>WOOD RANGING.—Concluded.</i>			
Tipping, P. ....		250 00	
Urquhart, A. ....		985 00	
Vincent, H. T. ....		1,195 00	
Wallace, F. ....		516 00	
Watts, J. J. ....		440 00	
Watts, W. B. ....		504 00	
Webster, W. A. .... Disbursements ..		448 05	
White, A. T. ....		220 00	
Whelan, P. J. ....		1,565 00	
Williams, Fred. ....		142 50	
Williams, Wm. ....		186 00	
Wilkins, G. N. ....		875 00	
Wilson, D. ....	745 00		
Disbursements ..	49 60		
		794 60	
Wilson, R. ....		138 00	
Windle, Jas. ....		360 00	
Wylie, D. M. ....		10 00	
Young, R. J. ....	690 00		
Disbursements ..	134 71		
		824 71	
Yuill, Thos. ....		575 00	
Zavitz, E. J. .... Disbursements ..		30 77	
			117,503 41
<i>ESTIMATING FOREST RESERVES.</i>			
Cloud, Wm. ....		90 00	
Henderson, Chas. .... Disbursements ..		321 54	
McLean, John ....		150 00	
McLean, James D. ....		90 00	
			651 54
<i>EXPLORATION AND ESTIMATION OF TIMBER BERTHS.</i>			
Henderson, Chas. .... Disbursements ..			307 85
<i>FIRE RANGING.</i>			
Adams, Alex. ....		352 50	
Allen, R. A. ....		809 00	
Allan, D. L. ....		294 00	
Allen, D. ....		330 00	
Allard, Geo. ....		327 50	
Aldred, O. ....		292 50	
Algoma Eastern Railway .....		87 59	
Armstrong, G. ....		305 00	
Armstrong, W. H. ....		337 50	
Armstrong, T. C. ....		317 50	
Arnott, Wm. ....		315 00	
Arnold & Bell, Limited .....		54 00	
Atchison, I. M. ....		345 00	
Atchison, J. ....		72 00	
Atkinson, H. ....		332 50	
Bailey, H. ....		325 00	
Baker, F. P. ....		332 50	
Barnell, G. B. ....		345 00	
Bartlett, G. W. .... Disbursements ..		3,202 25	
Bartlett, Hugh .....		86 15	
Bartlett, Herb. ....		39 03	
<i>Carried forward</i> .....		8,901 52	183,905 31

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		8,901 52	183,905 31
<i>FIRE RANGING.—Continued.</i>			
Behoniell, Geo. ....		80 00	
Bedell, E. ....		322 50	
Beddome, W. E. ....		121 00	
Beaumont, A. ....		300 00	
Begin, P. ....		341 25	
Begin, Dave ....		300 00	
Bellefeuille, M. ....		183 75	
Belanger, E. ....		355 00	
Belanger, E. ....		335 00	
Berry, Geo. ....		317 50	
Berrige, C. W. ....		322 50	
Bertrand, H. ....		360 00	
Biederman, Wm. ....		335 00	
Bisallion, Leo. ....		322 50	
Bissonette, R. ....		317 50	
Bliss, L. E. ....	Disbursements.	2,030 90	
Bliss, C. L. ....		889 00	
Blondin, A. ....		285 00	
Blair, B. ....		6 00	
Boice, R. ....		69 50	
Bookhout, H. ....		335 00	
Boon, Isaac ....		77 50	
Bonter, S. ....		357 50	
Both, C. ....		277 50	
Bowins, John ....		360 00	
Bottrell, Dan ....		345 00	
Bowes, John ....		297 50	
Bowland, J. J. ....	496 00		
Disbursements	77 75		
		573 75	
Bonwell, J. V. ....		115 00	
Box, Bert ....		340 00	
Brooks, A. ....		470 00	
Bromley, Ed. ....		227 50	
Brown, A. ....		345 00	
Brown, Thos. ....		325 00	
Brown, T. E. ....		300 00	
Brozeau, O. ....		355 00	
Brum, A. ....	555 00		
Disbursements	133 25		
		688 25	
Brum, C. ....		345 00	
Brunet, A. ....		312 50	
Buisson, W. ....		145 00	
Buie, D. ....		212 00	
Burger, Wm. ....		355 00	
Burton, D. B. ....		335 00	
Bunting, H. T. ....		345 00	
Campbell, A. ....		335 00	
Campbell, W. L. ....		292 50	
Campbell, J. S. ....		272 50	
Campbell, D. ....		362 50	
Carnochan, G. ....		355 00	
Case, G. W. ....		320 00	
Cavanagh, S. ....		345 00	
Chambers, Thos. ....		295 00	
Chaloner, C. ....		313 50	
Chapman, W. ....		335 00	
<i>Carried forward</i> .....		27,560 42	183,905 31



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		27,560 42	183,905 31
<i>FIRE RANGING.—Continued.</i>			
Chittick, W. J. ....		372 50	
Chenier, H. ....		182 50	
Christie, W. P. .... Disbursements .....		345 84	
Clark, H. ....		332 50	
Clayton, B. ....		22 76	
Cluff, R. A. ....		292 50	
Cocoa, Alex. ....		297 50	
Connell, Wm. ....		222 50	
Coombs, R. ....		12 50	
Conture, D. ....		362 50	
Cooper, A. ....		345 00	
Countryman, A. G. ....		335 00	
Cousineau, C. ....		345 00	
Coyne, P. ....	690 00		
Disbursements .....	140 17		
		830 17	
Crombie, V. ....		335 00	
Crawford, R. M. ....		317 50	
Crumb, Ben. ....		155 00	
Currell, Rich. ....		355 00	
Currie, D. H. ....		302 50	
Curry, P. W. M. ....		290 00	
Dance, H. L. ....		332 50	
Dean, A. ....		327 50	
Deschamp, N. ....		345 00	
Dickson, J. ....		355 00	
Dial, A. C. ....		337 50	
Didier, L. P. ....		957 00	
Dixon, A. J. ....		307 50	
Doolittle, R. ....		345 00	
Doyle, Gus. ....		335 00	
Drake, F. ....		337 50	
Duff, R. A. ....		470 00	
Dukes, V. ....		335 00	
Duncan, R. ....		313 50	
Durnin, C. ....		352 50	
Dyson, W. ....		12 50	
Edwards, G. H. ....		335 00	
Ellber, Geo. ....		355 00	
Elliott, Jack ....		330 00	
Elliott, G. ....		334 00	
Ellis, E. C. ....		320 00	
Ellsworth, C. B. ....		345 00	
Emerson, H. ....		335 00	
English, M. ....		357 50	
Evans C. S. ....		307 50	
Fairbairn, N. H. ....	825 00		
Disbursements .....	292 67		
		1,117 67	
Farrell, S. H. ....		325 00	
Favereau, Geo. ....		355 00	
Ferguson, T. H. ....		362 50	
Ferguson, Geo. ....		357 50	
Fitzgerald, G. ....		92 50	
Fitzgerald, Robt. ....		345 00	
Fitzbock, J. ....		259 50	
Fitzpatrick, P. ....		250 00	
Fisher, Geo. ....		396 00	
<i>Carried forward</i> .....		46,156 86	183,905 31

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		46,156 86	183,905 31
<b>FIRE RANGING.—Continued.</b>			
Flannigan, Jas. ....		335 00	
Flynn, M. ....		337 50	
Foley Bros. and Northern Construction Co. ....		138 06	
Fox, W. W. ....		310 00	
Fraser, W. A. ....		332 50	
Fraser, Alex. ....		352 50	
Frawley, M. ....		267 50	
Freele, L. W. M. ....		335 00	
Frenette, S. ....		335 00	
Furry, C. ....		357 50	
Gagne, F. ....	950 00		
Disbursements .....	223 95		
		1,173 95	
Gagne, J. ....		295 00	
Gale, W. J. ....		387 00	
Galt, R. ....		332 75	
Gardner, W. T. ....		312 50	
Gaskill, W. T. ....		65 00	
Garrow, G. ....		350 00	
Gauld, W. H. ....		257 50	
Gault, Jas. ....		345 00	
Gauthier, Theo. ....		355 00	
Gemmill, J. ....	516 00		
Disbursements .....	173 65		
		689 65	
Gillanders, G. ....		347 50	
Gooding, S. ....		282 50	
Griffin, D. ....		315 00	
Guthrie, Wm. ....		355 00	
Hackett, Wm. ....		337 50	
Hainstock, W. A. ....		220 00	
Hall, T. ....		335 00	
Hamond, D. ....		322 50	
Hammond, H. ....		313 50	
Hammond, W. S. ....		245 00	
Hand, Thos. ....		512 00	
Hanmer, Geo. ....		340 00	
Hardy, F. ....		357 50	
Hardingham, V. C. ....		335 00	
Harris, E. ....		97 59	
Hatch, W. ....		68 71	
Henderson, Chas. ....		221 69	
Henderson, J. ....		327 50	
Heroux, J. ....		352 50	
Hicks, A. ....		71 99	
Higgins, R. ....		265 00	
Hill, J. E. ....		297 50	
Holman, L. ....		8 08	
Holmes, J. H. ....		327 50	
Holt, J. ....		320 00	
Hollis, J. ....		312 50	
Hopkins, R. D. ....		312 50	
Hourigan, C. ....		335 00	
Huckson, A. H. ....	933 33		
Disbursements .....	292 00		
		1,225 33	
Hudgins, W. H. ....		337 50	
<i>Carried forward</i> .....		63,319 66	183,905 31

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		63,319 66	183,905 31
<i>FIRE RANGING.—Continued.</i>			
Humphreys, E. ....		322 50	
Hutcheson, G. T. ....		167 50	
Ingham, F. ....		322 50	
Irish, Wm. ....		425 00	
Jackson, W. H. ....		337 50	
Jackson, F. N. ....		355 00	
Jamieson, K. ....		337 50	
Jarvis, E. ....		317 50	
Jenkins, S. ....	642 00		
Disbursements .....	214 00		
		856 00	
Johnson, V. J. ....		237 50	
Johnston, W. ....		357 50	
Johnston, S. ....		285 00	
Jones, K. G. ....		257 50	
Judge, S. E. ....		165 00	
Keely, E. A. ....		355 00	
Kelly, T. ....		355 00	
Keenahan, Matt. ....		355 00	
Kells, L. ....		337 50	
Kennedy, T. A. ....		315 00	
Kerr, Alex. ....		307 50	
King's Printer .....		125 00	
Labbie, A. ....		355 00	
Lafontaine, P. ....		333 50	
Langford, T. ....		345 00	
Lanktree, J. ....		332 50	
Lamb, D. ....		345 00	
Lash, A. ....		195 00	
Laurin, J. A. ....		315 00	
Leblanc, O. ....		552 00	
Leblanc, F. ....		322 50	
Leblanc, O. ....		337 50	
Leblanc, R. W. ....		115 00	
Labelle, A. ....		335 00	
Leach, P. ....		335 00	
Leacy, J. ....		355 00	
Leddy, J. ....		322 50	
Lee, J. B. ....	760 00		
Disbursements .....	186 45		
		946 45	
Lee, E. J. ....		302 50	
Leggett, C. ....		355 00	
Lepper, R. H. ....		322 50	
Liddle, H. ....		335 00	
Linklater, W. ....		363 50	
Lloyd, W. H. ....		355 00	
Lockhart, W. H. ....		362 50	
Lofquist, M. ....		292 50	
Long, H. E. ....	885 00		
Disbursements .....	196 74		
		1,081 74	
Lougheed, C. ....		70 00	
Loy, R. ....		322 50	
Lumb, S. S. ....		327 50	
MacDonald, S. C. ....	Disbursements ..	112 10	
Macdonell, R. D. ....		356 00	
MacEwen, B. ....		355 00	
<i>Carried forward</i> .....		81,328 45	183,905 31



*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....			81,328	45	183,905	31
<i>FIRE RANGING.—Continued.</i>						
MacGillivray, G. ....			265	00		
MacNeill, E. R. ....			355	00		
Mack, H. ....			115	00		
Mair, Wm. ....			330	00		
Margach, Wm. .... Disbursements..			1,011	09		
Margach, J. A. ....			488	00		
Marshall, F. R. ....			300	00		
Marston, Wm. ....			315	00		
Martlin, R. F. ....			337	50		
Maxwell, A. ....			312	50		
May, H. ....	880	00				
Disbursements .....	257	46				
			1,137	46		
Merchant, J. ....			345	00		
Merchant, S. W. ....			332	50		
Mercer, G. A. ....			335	00		
Merritt Lumber Co. ....			21	00		
Miller, R. ....			335	00		
Molyneaux, Geo. ....	414	00				
Disbursements .....	103	50				
			517	50		
Morand, L. ....			355	00		
Morin, J. ....			355	00		
Morgan, J. H. ....			310	00		
Moore, Jas. ....			302	50		
Morris, N. ....			305	00		
Morris, D. ....			345	00		
Morrison, M. C. ....			315	00		
Mousseau, E. ....			297	50		
Mousseau, S. ....			297	50		
Moyles, J. ....			58	50		
Murphy, C. ....			320	00		
Myers, R. A. ....			317	50		
Myers, T. R. ....			287	50		
McAuley, W. D. ....			520	00		
McCadden, P. ....			322	50		
McCallum, A. J. ....			295	00		
McClellan, W. S. ....			337	50		
McCullough, D. J. ....			355	00		
McDonald, R. A. ....			170	00		
McDonald, A. J. ....			34	50		
McDonell, L. P. ....			345	00		
McIntyre, Peter ....			355	00		
McIntosh, J. ....			327	50		
McEwen, H. ....			327	50		
McKinnon, E. ....			335	00		
McKinnon, H. ....			332	50		
McKechnie, J. ....			335	00		
McKenzie, A. ....			100	00		
McKay, J. L. ....			87	50		
McLaughlin, John ....			172	50		
McLennan, D. ....			27	00		
McLeod, Wm. ....			332	50		
McLean, Dan. ....			297	50		
McMullen, S. J. ....			335	00		
McMullen, Wm. ....			340	00		
McNeely, M. ....			322	50		
McNevin, Alex. ....			345	00		
<i>Carried forward</i> .....			98,798	50	183,905	31

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....			98,798	50	183,905	31
<i>FIRE RANGING.—Continued.</i>						
McPhee, D. J. ....			197	50		
McQuinn, W. J. ....			315	00		
McRae, D. A. ....			510	00		
Neelon, G. M. ....			457	00		
Nelson, Nels. ....			192	50		
Netwegisis, A. ....			32	00		
Nepigon Construction Co. ....			53	40		
Newburn, Wm. ....			337	50		
Newhouse, A. ....			508	00		
Nevitt, J. ....			86	15		
Nichol, D. H. ....			337	50		
Nixon, W. H. ....			335	00		
Nockwinogis, S. ....			8	00		
O'Brien, M. ....			75	00		
O'Brien, J. ....			355	00		
O'Brien, Fowler and McDougall Bros. ....			61	49		
O'Grady, W. J. ....			250	00		
O'Neill, T. ....			297	50		
Oikle, A. ....			210	00		
Oliver, J. A. .... Disbursements. ....			563	76		
Ouellette, F. ....			335	00		
Passmore, J. ....			277	50		
Patterson, B. ....			345	00		
Paul, C. ....			396	00		
Pecaski, J. ....			145	00		
Pecks, J. ....			2	00		
Pelletier, Peter ....			185	00		
Pierce, F. ....			310	00		
Pigeon, C. ....			26	00		
Piggot, J. A. ....			305	00		
Pingle, Alex. ....			335	00		
Piper, R. ....			300	00		
Poulin, N. ....			335	00		
Porter, B. ....			64	61		
Powell, John ....			115	00		
Powell, H. G. ....			335	00		
Presley, J. ....			305	00		
Pritchard, F. ....			501	75		
Rabbitts, Max ....			889	00		
Racey, M. J. ....			322	50		
Ranger, A. ....			305	00		
Rawson, C. L. ....			315	00		
Redden, M. A. ....			357	50		
Reeve, E. M. ....			292	50		
Reeve, A. S. ....			270	00		
Renshaw, A. ....			307	50		
Remus, C. ....			345	00		
Renton, G. M. ....			277	50		
Reid, Robert ....			117	50		
Reid, C. F. ....			425	00		
Reveler, Mac. ....			315	00		
Richardson, J. S. ....			345	00		
Rivers, S. ....			302	50		
Robertson, J. ....			99	61		
Rochfort, A. ....			355	00		
Rodden, M. J. ....			325	00		
Roe, N. ....			317	50		
Rose, A. ....			335	00		
<i>Carried forward</i> .....			115,217	27	183,905	31

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ f c.
<i>Brought forward</i> .....		115,217 27	183,905 31
<i>FIRE RANGING.—Continued.</i>			
Rousette, Jos. ....		115 00	
Row, James .....		357 50	
Rusk, O. W. ....	780 00		
Disbursements .....	2,820 07		
		3,600 07	
Ryan, T. ....		335 00	
Ryan, Wm. ....		322 50	
Sanderson, S. ....		335 00	
Saunders, H. A. ....		310 00	
Saunders, L. ....		265 00	
Sauve, John .....		327 50	
Savard, A. ....		317 50	
Scaffner, J. ....		325 00	
Schenk, N. ....		325 00	
Schoales, R. ....		335 00	
Schroeder, A. ....		315 00	
Scott, C. V. ....		295 00	
Scott, J. ....		145 00	
Scott, R. ....		520 00	
Seymour, R. F. ....		312 50	
Sheridon, W. E. ....		332 50	
Shilling, H. ....		551 00	
Shore, D. ....		355 00	
Simmons, A. F. ....		325 00	
Sinclair, A. ....		24 00	
Sloan, John .....		382 50	
Small, M. A. ....		317 50	
Smedley, A. E. ....		320 00	
Smellie, H. ....		55 00	
Smith, V. ....		525 00	
Smith, A. ....		7 30	
Smith, H. ....		320 00	
Smith, E. J. ....		332 50	
Snider, R. A. ....		332 50	
Solomon, J. ....		357 50	
Spence, A. ....		294 25	
Spence, D. ....		345 00	
Spence, C. A. ....		332 50	
Spreadborough, G. S. ....		335 00	
Spurr, Wm. ....		162 50	
Stark, S. W. ....		302 50	
Stewart, E. B. ....		192 50	
Stewart, Chas. ....		320 00	
Stewart, R. ....		335 00	
Stewart, C. ....		335 00	
Stewart, J. A. ....	850 00		
Disbursements .....	1,185 53		
		2,035 53	
Steward, W. ....		155 00	
Stevens, A. ....		327 50	
Stevens, W. J. ....		317 50	
Stevenson, G. H. ....		300 00	
Stevenson, R. ....		12 50	
Strathern, R. ....		335 00	
Sudds, D. ....		160 00	
<i>Carried forward</i> .....		135,209 42	183,905 31



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		135,209 42	183,905 31
<i>FIRE RANGING.—Concluded.</i>			
Sutherland, J. W. ....		322 50	
Superior Construction Co. ....		138 65	
Swanson, G. ....		285 00	
Swinson, C. ....		327 50	
Tang, John ....		352 50	
Taylor, C. J. ....		322 50	
Tibbetts, N. A. ....		272 50	
Tighe, T. J. ....		27 50	
Tillson, Andrew ....		185 00	
Thomas, P. ....		247 50	
Thompson, Ed. ....	399 00		
Disbursements .....	99 75		
		498 75	
Thompson, F. H. ....		327 50	
Thompson, T. ....		345 00	
Tooke, S. ....		320 00	
Toomer, S. ....		342 50	
Torrance, E. A. ....		170 00	
Tremblay, E. ....		330 00	
Tye, R. H. ....		75 00	
Urquhart, A. ....		468 00	
Valois, P. ....		330 00	
VanBowell, J. ....		25 00	
Wagner, Fred. ....		84 81	
Walker, Geo. ....		320 00	
Walton, H. ....		337 50	
Wallace, A. ....		315 00	
Washburn, B. ....		145 00	
Watts, Geo. .... Disbursements .....		225 77	
Watt, R. S. ....		345 00	
Wattie, W. ....		61 00	
Watson, M. ....		166 15	
Wease, A. ....		310 00	
Weir, G. A. ....		335 00	
Welsh, Jas. ....		345 00	
Wendt-Wreidt, A. J. ....		335 00	
Western, A. H. ....		300 00	
West, W. ....		302 50	
Westra, H. ....		317 50	
Whaley, H. ....		325 00	
Whiteman, F. H. ....		337 50	
Whytock, H. ....		332 50	
Wickens, H. ....		313 50	
Wilkins, G. N. ....		508 00	
Williams, R. A. ....		240 00	
Williams, S. E. ....		340 00	
Windell, Jas. ....		957 00	
Wood, W. D. ....		132 00	
Woodcock, Geo. ....		295 00	
Wright, J. ....		357 50	
Wright, A. ....		285 00	
Wright, H. H. ....		317 50	
Yeates, R. H. ....		355 00	
Young, R. R. ....		325 00	
			150,588 05
<i>Carried forward</i> .....			334,493 36

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					334,493	36
<b>FOREST RESERVES.</b>						
<i>Temagami Reserve, \$42,137.90.</i>						
Agarias, C. ....			315	00		
Albright, E. ....			317	50		
Albright, L. ....			210	00		
Allen, N. B. ....			305	00		
Armstrong, H. F. ....			330	00		
Axford, B. W. ....			315	00		
Baines, W. H. ....			332	50		
Barrett, Thos. ....	765	00				
Disbursements .....	588	42				
			1,353	42		
Battten, B. N. ....			307	50		
Beatty, J. B. ....			297	50		
Bell, W. D. ....			315	00		
Benson, R. E. ....			312	50		
Benoit, E. ....			320	00		
Bibet, L. A. ....			225	00		
Bovin, H. ....			312	50		
Bowden, G. S. ....			315	00		
Briggs, A. V. ....			237	50		
Bulman, R. J. ....			315	00		
Carpenter, P. J. ....			185	00		
Cavill, A. H. ....			330	00		
Champagne, I. ....			315	00		
Chase, F. E. ....			332	50		
Chennette, J. ....			320	00		
Coghill, J. R. ....			315	00		
Coombs, F. H. ....			310	00		
Craig, H. A. ....			320	00		
Cronk, G. S. ....			312	50		
D'Embremont, F. ....			310	00		
Desroisiers, J. ....			277	50		
Dickson, G. J. ....			185	00		
Duffy, W. J. ....			305	00		
Dunbar, J. ....			315	00		
Elliott, W. J. ....			112	50		
Emery, G. B. ....			332	50		
Evans, Wm. ....			315	00		
Faeris, R. ....			1,050	50		
Fick, D. R. ....			197	50		
Ford, Fred. ....			120	00		
Forsyth, G. ....			302	50		
Gibson, G. A. L. ....			297	50		
Goodearle, W. E. ....			302	50		
Greenrod, S. ....			332	50		
Grenier, J. ....			315	00		
Grenier, Alex. ....			82	50		
Hagerman, G. A. ....			332	50		
Hanley, A. F. ....			265	00		
Haines, H. ....			307	50		
Harris, B. J. ....			67	50		
Harrison, J. W. ....			430	00		
Henderson, C. ....			10	30		
Hendrick, C. P. ....			332	50		
Herlihy, D. ....			260	00		
<i>Carried forward</i> .....			16,334	22	334,493	36

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		16,334 22	334,493 36
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Continued.</i>			
Hindson, C. E. ....	1,300 00		
Disbursements .....	995 85		
		2,295 85	
Holstein, A. ....		315 00	
Inderwick, C. C. ....		312 50	
Kearns, R. C. ....		315 00	
Keenan, J. T. ....		332 50	
Kemp, W. S. ....		330 00	
Kennedy, Wm. ....		505 00	
Kirkup, N. N. ....		272 50	
Lamarche, A. ....		912 50	
Larmour, R. R. ....		315 00	
Levinge, S. T. ....		315 00	
Lewis, S. T. ....		332 50	
Livingston, J. ....		322 50	
Lord, T. V. ....		315 00	
Masson, D. M. ....		170 00	
Maynard, W. B. ....		270 00	
Mohr, C. B. ....		300 00	
Montrueil, J. ....		315 00	
Moore, C. A. ....		305 00	
Moorehouse, C. ....		185 00	
Mowat, A. M. G. ....		310 00	
Murphy, P. ....		192 50	
McCart, H. M. ....		332 50	
McKay, A. ....		315 00	
McLaughlin, John ....		10 00	
McLean, G. R. ....		267 50	
McLeish, W. J. ....		315 00	
McLeod, J. D. ....		332 50	
Nadon, P. ....		315 00	
Neil, Wm. ....		315 00	
Nicholas, H. ....		332 50	
O'Neil, W. S. ....		317 50	
Papineau, W. C. ....		317 50	
Passmore, S. ....		330 00	
Perron, M. ....		315 00	
Petrant, Wm. ....		312 50	
Philpot, G. M. ....		332 50	
Plaunt, N. ....		310 00	
Pratt, D. ....		70 00	
Price, D. W. ....		332 50	
Powell, J. ....		315 00	
Rankin, R. W. ....		315 00	
Reesor, Geo. ....		317 50	
Reid, F. L. ....		295 00	
Rochon, Jos. ....		462 50	
Roger, W. G. ....		315 00	
Routhier, E. ....		317 50	
Russell, F. ....		312 50	
Sage, P. ....		315 00	
Sasseville, Joe ....		302 50	
Sharp, J. F. ....		315 00	
Shelton, H. ....		315 00	
<i>Carried forward</i> .....		34,642 57	334,493 36



*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....			34,642	57	334,493	36
<i>FOREST RESERVES.—Continued.</i>						
<i>Temagami Reserve.—Concluded.</i>						
Shields, R. H. ....			315	00		
Simpson, T. ....			307	50		
Smith, E. H. ....			315	00		
Smith, L. ....			302	50		
Sparks, W. E. L. ....			302	50		
Sutton, F. ....			315	00		
Swayze, D. A. ....			305	00		
Vivaris, D. ....			912	50		
Vivaris, M. ....			312	50		
Warren, P. S. ....			297	50		
Western, C. ....			332	50		
Western, E. A. ....			277	50		
White, Joseph ....			315	00		
White, James ....			312	50		
Whitney, K. H. ....			302	50		
Williams, Chas. ....			312	50		
Willoughby, J. B. ....			315	00		
Wilson, B. ....			317	50		
Winder, A. ....			315	00		
Young, R. J. ....			710	00		
Disbursements .....			300	33		
					1,010	33
<i>Metagami Reserve, \$8,127.82.</i>						
Armstrong, H. F. ....					147	50
Burden, John ....			830	00		
Disbursements .....			390	32		
					1,220	32
Gauthier, W. ....			345	00		
Jones, C. L. ....			197	50		
Lawrence, C. F. ....			300	00		
Lefroy, L. D. ....			57	50		
Logan, H. ....			337	50		
Marks, V. H. ....			345	00		
Melville, R. ....			342	50		
McDonald, J. A. ....			317	50		
McFayden, J. ....			337	50		
McLaughlin, J. S. ....			172	50		
McLennen, H. ....			147	50		
Navere, Thos. ....			190	00		
Neddry, R. J. ....			200	00		
Ogg, C. S. ....			342	50		
Patton, J. ....			342	50		
Perry, W. G. ....			317	50		
Reid, J. ....			380	00		
Rountree, C. S. ....			342	50		
Schwab, C. D. ....			342	50		
Tate, J. ....			385	00		
Taylor, W. J. ....			385	00		
Topp, J. V. ....			145	00		
Welch, L. S. ....			145	00		
Wickett, T. H. ....			342	50		
<i>Carried forward</i> .....			50,265	72	334,493	36

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....			50,265	72		334,493 36
<i>FOREST RESERVES.—Continued.</i>						
<i>Mississauga Reserve, \$20,066.19.</i>						
Acheson, L. ....			540	00		
Adams, W. ....			307	50		
Allen, Geo. ....			435	00		
Anderson, R. M. ....			272	50		
Belaney, A. ....			352	50		
Belanger, T. ....			430	00		
Bennett, J. O. ....			330	00		
Bickell, R. R. ....			336	00		
Buisson, Wm. ....			192	50		
Bulmer, A. ....			392	50		
Burden, J. ....			420	00		
Burden, Wm. ....			471	50		
Cameron, Geo. ....			332	50		
Causley, P. ....			422	50		
Dougherty, E. ....			342	50		
Dougherty, A. E. ....			325	00		
Draper, Wm. ....			315	00		
Duval, C. A. ....	935	00				
Disbursements .....	1,546	19				
			2,481	19		
Dyson, Isaac ....			322	50		
Evelene, A. ....			180	00		
Evelene, S. ....			272	50		
Featherstonehaugh, M. H. ....			327	50		
Flinchbaugh, A. B. ....			325	00		
Foreman, H. R. ....			312	50		
Fraser, Thos. ....			77	50		
Fyke, L. ....			330	00		
Gordon, T. S. ....			307	50		
Greer, D. G. ....			330	00		
Hamm, S. C. ....			210	00		
Hargrave, H. R. ....			297	50		
Hays, C. ....			392	50		
Hogarth, J. ....			277	50		
Jean, A. ....			437	50		
Knox, D. ....			430	00		
Leffler, R. D. ....			32	50		
Luke, Sam ....			222	50		
Miller, N. J. ....			222	50		
Morel, H. ....			392	50		
McAuley, Robt. ....			330	00		
McGrath, B. ....			317	50		
McKenzie, Alex. ....			85	00		
McLaughlin, John ....			192	50		
Orange, W. H. ....			230	00		
Patterson, M. ....			317	50		
Pickaske, John ....			130	00		
Philips, H. ....			280	00		
Philips, Colin ....			130	00		
Philips, Theo. ....			45	00		
Richardson, G. B. ....			182	50		
Saunders, J. ....			232	50		
Sawyer, E. C. ....			280	00		
Scott, W. W. ....			317	50		
Scott, J. H. ....			192	50		
<i>Carried forward</i> .....			67,926	91		334,493 36

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		67,926 91	334,493 36
<i>FOREST RESERVES.—Continued.</i>			
<i>Mississaga Reserve.—Concluded.</i>			
Sherlock, A. E. ....		310 00	
Slater, Wm. ....		315 00	
Spanial, J. ....		125 00	
Strachnan, J. G. ....		292 50	
Taylor, C. N. ....		420 00	
Thorne, L. ....		30 00	
Washburn, B. L. ....		190 00	
Williams, Chas. ....		80 00	
Wilson, R. H. ....		317 50	
Wyatt, R. E. ....		325 00	
<i>Nepigon Reserve, \$13,234.90.</i>			
Backhurst, J. ....		37 50	
Barker, C. ....		352 50	
Blair, Bert ....		417 50	
Bliss, L. E. ....	765 00		
Disbursements .....	3,341 40		
		4,106 40	
Bouchard, J. ....		473 50	
Bouchard, M. ....		102 50	
Connell, Wm. ....		67 50	
Crumb, B. ....		170 00	
Dawkins, John ....		207 50	
Dawa, J. O. ....		102 50	
Dawa, J. ....		97 50	
Dier, J. ....		398 50	
Dixon, A. J. ....		45 00	
Esquago, P. ....		10 00	
Ferris, R. H. ....		357 50	
Fountain, H. A. ....		335 00	
Fraser, Alex. ....		187 50	
Gray, E. L. ....		355 00	
Husband, A. C. ....		345 00	
Hutcheson, G. F. ....		175 00	
Judge, S. E. ....		152 50	
Lafontaine, P. ....		77 50	
Legard, J. ....		80 00	
Meredith, T. R. ....		355 00	
Micholson, J. ....		395 00	
Monahan, P. ....		187 50	
Nelson, Nels. ....		62 50	
Netmegesic, F. ....		60 50	
Netinigesic, A. ....		300 00	
Nighbor, F. J. ....		340 00	
Nockwenoges, Luke ....		8 00	
Pigeon, C. ....		347 50	
Rae, A. ....		451 50	
Salsbury, M. ....		540 00	
Sanderson, C. E. ....		347 50	
Shilling, H. ....		87 00	
Stewart, W. ....		170 00	
Torrance, E. A. ....		185 00	
Tyrrell, Geo. ....		202 50	
Ward, Jas. ....		494 50	
Wawai, M. ....		47 50	
<i>Carried forward</i> .....		83,566 81	334,493 36



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		83,566 81	334,493 36
<b>FOREST RESERVES.—Concluded.</b>			
<i>Eastern Reserve, \$2,828.85.</i>			
Brooks, M. ....		345 00	
Drysdale, Samuel .....		345 00	
McGregor, D. ....		345 00	
Smith, Chas. ....		345 00	
Snider, L. ....		345 00	
Stewart, Wm. ....		345 00	
Tapping, Thos. ....	600 00		
Disbursements .....	158 85		
		758 85	
<i>Sibley Reserve, \$705.00.</i>			
Hornick, Geo. ....		302 50	
Oliver, J. A. ....		100 00	
Quinn, J. J. ....		302 50	
			87,100 66
<b>FORESTRY.</b>			
Newman, F. S., travelling expenses .....		31 20	
Bell Telephone Company .....	32 75		
Express and cartage .....	65 57		
		98 32	
Supplies .....		2,099 97	
Labor .....		6,150 30	
Sundries .....		190 55	
			8,570 34
<b>MINES AND MINING.</b>			
Miller, W. G., Provincial Geologist, services.....	4,550 00		
Disbursements .....	421 01		
		4,971 01	
Knight, C. W., 1st Assistant Geologist, services..	2,250 00		
Disbursements .....	802 55		
		3,052 55	
Burrows, A. G., 2nd Assistant Geologist, services.	2,150 00		
Disbursements .....	436 48		
		2,586 48	
Hopkins, P. E., 3rd Assistant Geologist, services.	1,049 04		
Disbursements .....	418 17		
		1,467 21	
Mickle, G. R., Mine Assessor, services.....	4,000 00		
Disbursements .....	620 48		
		4,620 48	
Godson, T. E., Mining Commissioner, services....	4,300 00		
Dance, R. W., Mining Commissioner's Clerk,			
services .....	1,408 55		
Morris, W. H., Mining Commissioner's Clerk,			
services .....	86 26		
Disbursements .....	1,010 65		
		6,805 46	
Sutherland, T. F., Inspector of Mines, services...	2,500 00		
Disbursements .....	756 63		
		3,256 63	
Collins, E. A., 1st Assistant Inspector of Mines,			
services .....	2,300 00		
Disbursements .....	1,459 65		
		3,759 65	
<i>Carried forward</i> .....		30,519 47	430,164 36

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		30,519 47	430,164 36
<i>MINES AND MINING.—Concluded.</i>			
McMillan, J. G., 2nd Assistant Inspector of Mines, services .....	2,300 00		
Disbursements .....	666 09	2,966 09	
Bartlett, J., 3rd Assistant Inspector of Mines, services .....	1,200 00		
Disbursements .....	910 05	2,110 05	
McKay, A. A., 4th Assistant Inspector of Mines.. Disbursements .....		557 35	
Rogers, W. R., Topographer, services.....	1,850 00		
Disbursements .....	38 65	1,888 65	
Bell, W. J., Cartographer, services .....	1,245 17		
Disbursements .....	250 00	1,495 17	
McArthur, T. A., Inspector of Recorders' Offices, services .....	700 00		
Disbursements .....	368 25	1,068 25	
Berry, J. W., services .....		55 00	
Greenland, C. W., services .....	303 85		
Disbursements .....	62 05	365 90	
Near, A. E., services .....	257 67		
Disbursements .....	81 15	338 82	
Parsons, A. L., services.....	423 08		
Disbursements .....	423 75	846 83	
Scott, John, services .....	658 34		
Disbursements .....	333 06	991 40	
Sharpe, D., services .....	423 67		
Disbursements .....	242 55	666 22	
King's Printer .....		88 73	
Methodist Book Room .....		11 11	
Express.....		116 20	
Sundries .....		68 26	
<i>MINING RECORDERS.</i>			44,153 50
Bowker, S. T., Recorder .....	1,000 00		
Disbursements .....	324 47	1,324 47	
Campbell, C. A., Recorder .....	900 00		
Washburn, H. C., Clerk .....	57 69		
Glazier, M. B., Clerk .....	180 00		
Young, Miss E., Stenographer.....	358 26		
Shanahan, Miss M., Stenographer .....	147 69		
Disbursements .....	376 20	2,019 84	
Gauthier, G. H., Recorder.....	1,500 00		
Graham, F. W., Clerk .....	1,203 85		
O'Brien, J. D., Clerk .....	1,023 27		
Disbursements .....	364 55	4,091 67	
<i>Carried forward</i> .....		7,435 98	474,317 86

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		7,435 98	474,317 86
<b>MINING RECORDERS.—Concluded.</b>			
Hough, J. A., Recorder .....	1,200 00		
Browning, A. J., Clerk .....	1,000 00		
Glazier, M. B., Clerk .....	190 38		
Gardiner, Miss I. M., Stenographer .....	631 49		
Disbursements .....	682 55		
		3,704 42	
McQuire, H. F., Recorder .....	500 00		
Disbursements .....	152 90		
		652 90	
Morgan, J. W., Recorder .....	1,000 00		
Disbursements .....	315 80		
		1,315 80	
Sheppard, H. E., Recorder .....	1,000 00		
Glazier, M. B., Clerk .....	93 46		
Disbursements .....	199 60		
		1,293 06	
Skill, A., Recorder .....	1,200 00		
Glazier, M. B., Clerk .....	93 46		
Disbursements .....	66 26		
		1,359 72	
Smith, G. T., Recorder .....	2,363 44		
Sarsfield, J. M., Clerk .....	1,163 44		
Ferguson, L. H., Clerk .....	333 00		
Monroe, Miss E., Stenographer .....	760 25		
Smith, Miss M. H., Stenographer .....	579 68		
Disbursements .....	779 10		
		5,978 91	
Spry, W. L., Recorder .....	723 69		
Disbursements .....	20 00		
		743 69	
Express .....	93 09		
King's Printer .....	509 96		
Methodist Book Room .....	55 64		
		658 69	
<b>PROVINCIAL ASSAY OFFICE.</b>			
			23,143 17
McNeill, W. K. ....	1,800 00		
Disbursements .....	19 04		
		1,819 04	
Rothwell, T. E. ....	1,168 88		
Disbursements .....	226 30		
		1,395 18	
Supplies .....		300 96	
Disbursements .....		74 22	
			3,589 40
<b>CULLERS' ACT.</b>			
Christie, W. P. ....	Disbursements .....	8 00	
McDougall, J. T. ....	Disbursements .....	11 80	
			19 80
<b>EXPENSES NOT OTHERWISE PROVIDED FOR.</b>			
McKay, A. A., Salary <i>re</i> Assistant Inspector of Mines .....		700 00	
Ellis, W. H., Salary <i>re</i> investigating Natural Gas. ....		600 00	
Bartlett, J., Salary <i>re</i> Assistant Inspector of Mines .....		383 33	
Hendricks, G. F., Salary and Disbursements <i>re</i> Toronto Exhibition .....	191 85		
<i>Carried forward</i> .....	191 85	1,683 33	501,070 23



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....	191 85	1,683 33	501,070 23
EXPENSES NOT OTHERWISE PROVIDED FOR.—			
<i>Concluded.</i>			
Brophy, W. H., Salary <i>re</i> Toronto Exhibition....	49 50		
West, Walter, Salary <i>re</i> Toronto Exhibition.....	50 00		
Flannigan, F., Salary <i>re</i> Toronto Exhibition.....	6 75		
Byam, F., Salary <i>re</i> Toronto Exhibition.....	13 50		
Rothwell, T. E., Disbursements <i>re</i> Toronto Exhi- bition .....	9 30		
McNeill, W. K., Disbursements <i>re</i> Toronto Exhi- bition .....	30 80		
		351 70	
General Disbursements <i>re</i> Toronto Exhibition....		561 13	
			2,596 16
SURVEYS .....			36,496 20
BOARD OF SURVEYORS .....			200 00
EXPERIMENTAL TREATMENT OF ORE.....			35 00
REFUNDS—Miscellaneous .....			16,033 98
CONTINGENCIES.			
<i>Departmental.</i>			
Printing and Binding .....	5,296 52		
Stationery .....	4,912 54		
		10,209 06	
Postage .....	1,945 34		
Express .....	379 62		
		2,324 96	
Telegraphing .....	695 53		
Car Fare .....	40 00		
		735 53	
Subscriptions .....	253 64		
Advertising .....	13,555 22		
		13,808 86	
Typewriters and repairs .....		552 80	
Hearst, Hon. W. H., travelling expenses.....	200 00		
Newman, F. S., travelling expenses.....	62 80		
Zavitz, E. J., travelling expenses.....	67 56		
Acres, H. G., services <i>re</i> Waterways.....	313 00		
Hele, C. C., travelling expenses.....	6 65		
Teskey, J. F., valuating water lots.....	25 00		
Nesbitt, W., services <i>re</i> Petewawa Military Camp	300 00		
White, A., travelling expenses .....	138 10		
Hutcheon, J., travelling expenses .....	384 26		
Rorke, L. V., travelling expenses .....	6 75		
Dalton Company of Canada, Adding Machine....	357 50		
		1,861 62	
Extra Clerks .....	3,859 15		
Sundries .....	96 50		
		3,955 65	
BUREAU OF MINES.			
Printing and Binding .....	1,191 49		
Stationery .....	1,379 09		
		2,570 58	
<i>Carried forward</i> .....		2,570 58	589,880 05

*Appendix No. 6.—Concluded.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....		2,570 58.	589,880 05
<b>BUREAU OF MINES.—Concluded.</b>			
Postage .....	493 41		
Telegraphing .....	212 05		
Express and Cartage .....	63 91		
Advertising .....	682 10		
Subscriptions .....	333 53		
Maps .....	649 02		
		2,434 02	
Gibson, T. W., travelling expenses .....	194 22		
Typewriters, repairs, etc. ....	72 50		
		266 72	
Nicholas, F. J., Preparing Index .....	110 50		
Morris, W. H., Preparing Tax Rolls.....	68 00		
Lemoine, Wm., Preparing Tax Rolls.....	68 00		
Sundries .....	498 47		
		744 97	
<b>FORESTRY.</b>			6,016 29
Zavitz, E. J., travelling expenses .....	120 35		
Newman, F. S., travelling expenses .....	174 00		
Madden, G. O., travelling expenses .....	15 60		
		369 95	
Bald, Miss J., services .....		263 33	
Postage .....	25 00		
Supplies .....	165 43		
Sundries .....	9 27		
		199 70	
			772 98
			\$596,669 32

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 7.*

Statement of Expenses on account of various Services under the direction of the Department of Lands, Forests and Mines for the year ending October 31st, 1914.

Service.	\$ c.	\$ c.	\$ c.
ALGONQUIN PARK .....		22,782 76	
ALGONQUIN PARK, EXTINGUISHING SQUATTERS' CLAIMS .....		2,000 00	
			24,782 76
QUETICO PROVINCIAL PARK .....			11,003 18
VETERANS' COMMUTATION .....			400 00
NORTHERN DEVELOPMENT			
THE MAKING OF ROADS.			
Whitson, J. F., Salary .....	4,208 33		
Bruce, A. E. D., do .....	2,303 38		
Stewart, L. D. N., do .....	2,499 96		
Lang, J. L., do .....	1,240 00		
Laird, R., do .....	2,355 55		
Chalmers, D., do .....	1,494 00		
Robinson, W. J., do .....	1,120 19		
Moore, J., do .....	1,450 00		
Mills, W. W., do .....	1,347 22		
Fraser, J., do .....	368 00		
Beardall, F. G., do .....	1,504 79		
Laidlaw, Miss B., do .....	583 00		
		20,474 42	
Wages .....	392,754 93		
Contracts .....	123,112 28		
Supplies .....	255,101 45		
		770,968 66	
ADVANCEMENT OF SETTLEMENT AND COLONIZATION.			
Wages .....	6,445 85		
Supplies .....	2,589 26		
		9,035 11	
Construction of Hearst Sewer .....		2,100 00	
			802,578 19
BOUNTY ACT VII., EDWARD VII., CAP. 14.			
Coniagas Reduction Company .....		28,527 36	
Deloro Mining Reduction Company .....		12,274 44	
Standard Smelting and Refining Co. ....		214 92	
			41,016 72
			\$879,780 85

D. GEO. ROSS,  
Accountant.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.



*Appendix No. 8.*

## WOODS AND FORESTS.

Statement of revenue collected during the year ending October 31st, 1914.

	\$	c.
Amount of Western collections at Department.....	1,511,698	09
do Belleville collections " .....	8,220	71
do Ottawa collections.....	154,969	13
	1,674,887	93

J. A. G. CROZIER,  
Chief Clerk in Charge.AUBREY WHITE,  
Deputy Minister.*Appendix No. 9.*

## PATENTS BRANCH.

Statement of Patents, etc., issued by the Patents Branch from 1st November, 1913, to 31st October, 1914.

Public Lands (late Crown).....	669
" " (late School).....	27
" " (late Clergy Reserves).....	11
" " (University) .....	13
Free Grant Lands (Act of 1913) .....	448
" " " (Act of 1901) (Veterans).....	345
Mining Lands .....	611
Mining Leases .....	181
" " (University) .....	1
Crown Leases.....	38
Licenses of Occupation.....	21
Temagami Leases.....	1
Total.....	2,366

CHARLES S. JONES,  
Chief Clerk.AUBREY WHITE,  
Deputy Minister.

*Appendix*

## WOODS AND

## Statement of Timber and Amounts accrued from Timber Dues, Ground

## QUANTITY AND

Agencies.	Area covered by timber licenses.	Saw logs.			
		Pine.		Other.	
	Square miles.	Pieces.	Feet B.M.	Pieces.	Feet B.M.
Western Timber District .....	12,502	7,826,551	287,608,122	1,590,369	45,093,416
Belleville Timber District .....	658 $\frac{1}{4}$	157,591	3,522,780	324,294	9,740,027
Ottawa Timber District .....	4,172 $\frac{3}{4}$	1,298,044	71,832,292	605,993	16,409,732
	17,333	9,282,186	362,963,194	2,520,656	71,243,175

## General Statement

Agencies.	Cordwood.		Tan Bark.	Railway Ties.	Cedar Posts.	Poles.	Stave Bolts.	Pulpwood.
	Hard.	Soft.						
	Cords.	Cords.	Cords.	Pieces.	Cords.	Pieces.	Cords.	Cords.
Western Timber District .....	18,630	25,145	3,400	5,369,562	192	8,815	2,451	104,544
Belleville Timber District .....	500	.....	.....	8,086	60	601	.....	.....
Ottawa Timber District .....	2,006	.....	779	62,197	107	8,832	.....	.....
	21,136	25,145	4,179	5,439,845	359	18,248	2,451	104,544

J. A. G. CROZIER,  
Chief Clerk in Charge.

No. 10.

## FORESTS.

Rent and Bonus during the year ending 31st October, 1914.

## DESCRIPTION OF TIMBER.

Boom and Dimension.				Square Timber.		Piling.		Cedar.
Pine.		Other.		Pine.		Tamarac.		
Pieces.	Feet B.M.	Pieces.	Feet B.M.	Pieces.	Cubic feet.	Pieces	Ft. B.M.	Lineal feet.
145,803	16,759,518	39,153	4,126,519	2,490	114,125	838	75,943	28,225
2,300	321,735	3,782	711,763	.....	.....	.....	.....	.....
10,335	1,168,080	15,450	1,266,232	.....	.....	.....	.....	.....
158,438	18,249,333	58,385	6,104,514	2,490	114,125	838	75,943	28,225

of Timber.—Concluded.

## Amounts accrued.

Transfer bonus.	Interest.	Trespass.	Timber dues.	Bonus.	Deposits timber sales	Ground rent.	Total.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
3,905 00	3,952 33	21,668 42	1,004,034 79	397,237 48	322,975 00	69,457 68	1,823,230 70
180 00	69 62	567 30	14,338 13	875 15	.....	4,330 00	20,360 20
245 00	2,493 62	332 60	132,884 31	.....	.....	29,585 00	165,540 53
4,330 00	6,515 57	22,568 32	1,151,257 23	398,112 63	322,975 00	103,372 68	2,009,131 43

AUBREY WHITE,  
Deputy Minister.



Appendix No. 11.

Statement of work done in the Military branch of the Department of Lands, Forests and Mines, during the year 1914.

References for Veteran Patents issued.....	335
Locations under military certificates.....	47
Certificates applied in payment of lands .....	19
Certificates surrendered for commutation money .....	8
Letters received .....	5,080
Letters written.....	4,890
Special letters to agents .....	650
Special letters to mining recorders.....	300
Maps and reports supplied to veterans.....	1,100
Printed forms .....	850
Copies of Veteran Act supplied.....	250

H. E. JOHNSTON,  
Chief Clerk in Charge.

AUBREY WHITE,  
Deputy Minister.

Appendix No. 12.

Statement of the number of Letters received and mailed by the Department in 1911-12, 1912-13 and 1913-14.

Year,	Letters received.					Names indexed.	Orders-in-Council.	Returned letters.	Letters, circulars and reports mailed from Department.
	Sales and Free Grants.	Surveys.	Woods and Forests.	Mines.	Totals.				
1911-12	20,050	10,150	7,700	8,750	50,407	57,000	150	76	63,125
1912-13	27,658	11,775	7,219	8,800	55,452	61,500	150	75	65,280
1913-14	25,023	11,100	8,598	8,200	52,921	59,000	125	60	64,000

FRANK YEIGH,  
Registrar,

AUBREY WHITE,  
Deputy Minister.

## Appendix No. 13.

Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties and of patents issued in Free Grant Townships during the year ending 31st October, 1914.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Baxter .....	Muskoka. ....	J. B. Brown, Bracebridge..	4	432	4	42	3	8
Brunel .....	"	"	4	475			2	2
Cardwell .....	"	"	2	101	1	4	2	2
Chaffey .....	"	"		196	1	4	1	1
Draper .....	"	"	2	301			2	3
Franklin .....	"	"	3				2	1
Freeman .....	"	"	1	195				3
Macaulay .....	"	"	4	630	2	4	1	5
Medora .....	"	"	3	297	3	6	3	5
Monck .....	"	"	3	404			3	2
Morrison .....	"	"	9	1,293½			9	5
Muskoka .....	"	"	1	140				2
McLean .....	"	"	5	721			5	2
Oakley .....	"	"	1	100				1
Ridout .....	"	"	6	738	1	½	5	1
Ryde .....	"	"						2
Sherborne .....	"	"	1	97			1	3
Sinclair .....	"	"	8	1,286	9	35½	8	10
Stephenson .....	"	"						
Stisted .....	"	"						
Watt .....	"	"						
Wood .....	"	"						
Burpee .....	Parry Sound..	F. R. Powell, Parry Sound.			2	109		1
Carling .....	"	"	9	1,387	1	12	5	5
Christie .....	"	"	8	983			4	2
Conger .....	"	"	1	200	5	95		6
Cowper .....	"	"			1	83		7
Foley .....	"	"	1	100	1	1	1	2
Ferguson .....	"	"			1	200		2
Hagerman .....	"	"	4	681	4	34	3	2
Harrison .....	"	"						16
Henvey .....	"	"	3	306				3
Humphrey .....	"	"	1	200			2	1
McConkey .....	"	"	8	1,057	1	10	1	1
McDougall .....	"	"	4	478	1	89	3	2
McKellar .....	"	"						
McKenzie .....	"	"						2
Monteith .....	"	"	4	567	1	67	6	4
Shawanaga .....	"	"			2	25½	1	15
Wilson .....	"	"	2	269				2
Chapman ....	Parry Sound .	Dr. J. S. Freeborn.	4	407			1	4
Croft .....	"	Magnetawan	5	572			5	
Ferrie .....	"	"						2
Gurd .....	"	"	3	400	1	19	1	4
Lount .....	"	"	8	1,100	1	100	4	4
Machar .....	"	"	4	600	1	4	2	2
Mills .....	"	"	4	600			2	2

*Appendix No. 13.—Continued.*

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Pringle .....	Parry Sound..	Dr. J. S. Freeborn, Magnet- awan.	8	953	...	...	...	1
Ryerson .....	"	" "	...	...	...	...	...	3
Spence .....	"	" "	...	...	1	13	...	4
Strong .....	"	" "	1	123	...	...	2	1
Armour .....	Parry Sound..	W. Jenkin, Emsdale. ....	1	95	...	...	1	2
Bethune .....	"	" "	8	1,189	...	...	5	7
Joly .....	"	" "	3	500	...	...	4	2
McMurrich ...	"	" "	3	282	1	$\frac{1}{2}$	3	5
Perry .....	"	" "	...	...	...	...	...	3
Proudfoot ....	"	" "	2	200	1	$\frac{1}{3}$	2	1
Hardy .....	Parry Sound..	H. J. Ellis, Powassan.. ....	1	100	...	...	...	2
Himsworth ..	"	" "	11	1,300	1	11	8	3
Laurier .....	"	" "	2	227	...	...	3	2
Nipissing ....	"	" "	3	377	9	288	2	5
Patterson ....	"	" "	3	400	1	10	2	2
Bonfield ....	Nipissing ....	W. J. Parsons, North Bay...	12	1,170	2	12 $\frac{1}{2}$	4	6
Boulter (pt) ..	"	" "	...	...	...	...	...	...
Chisholm ....	"	" "	14	1,684	2	6 $\frac{1}{2}$	12	10
Ferris .....	"	" "	28	2,783	2	35 $\frac{1}{2}$	20	15
Anson .....	Haliburton ...	R. H. Baker, Minden.....	1	100	...	...	1	1
Glamorgan ..	"	" "	5	466	...	...	5	4
Hindon .....	"	" "	...	...	...	...	...	...
Lutterworth..	"	" "	5	557	...	...	2	2
Minden .....	"	" "	4	372	...	...	3	4
Snowdon ....	"	" "	10	1,207	...	...	8	...
Stanhope ....	"	" "	4	477	...	...	4	1
Anstruther ...	Peterboro' .	William Hales, Apsley .....	2	200	...	...	2	2
Burleigh, N.D.	"	" "	...	...	...	...	...	...
" S.D.	"	" "	...	...	...	...	...	...
Chandos .....	"	" "	1	62	...	...	...	1
Methuen .....	"	" "	...	...	...	...	...	...
Cardiff .....	Haliburton ...	James Wilson, Kinmount....	7	891	...	...	8	2
Cavendish ....	Peterboro' ....	" "	1	88	1	5	...	3
Galway .....	"	" "	13	1,472	1	97	6	2
Monmouth ...	Haliburton ...	" "	7	748	1	94	6	4
Bangor .....	Hastings ....	W. J. Douglas, Greenview...	8	800	...	...	5	...
Carlaw .....	"	" "	2	225	...	...	...	...
Cashel .....	"	" "	...	...	...	...	...	...
Dungannon .	"	" "	5	440 $\frac{1}{2}$	...	...	1	5
Faraday .....	"	" "	5	669 $\frac{1}{2}$	1	9	2	3
Herschel .....	"	" "	12	1,562 $\frac{1}{2}$	3	11	3	7
Limerick .....	"	" "	3	295	...	...	1	...
Mayo .....	"	" "	2	173	...	...	1	3
Monteagle ...	"	" "	13	1,413 $\frac{1}{2}$	2	12	8	6
McClure .....	"	" "	4	629	1	10	...	1
Wicklow .....	"	" "	8	890	3	16	5	1
Wollaston ....	"	" "	...	...	...	...	...	...
Algona, S. ....	Renfrew .....	Adam Prince, Wilno.....	...	...	...	...	...	1
Brougham ...	"	" "	6	807	...	...	...	5



## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold	No. of lots resumed.	No. of patents issued.
Brudenell ...	Renfrew ....	Adam Prince, Wilno.....	9	1,097	1	50	5	3
Burns .....	"	"	2	197	2	65½	17	3
Grattan .....	"	"	3	296	.....	.....	1	5
Griffith .....	"	"	9	942½	.....	.....	1	2
Hagarty .....	"	"	5	576	.....	.....	5	4
Jones .....	"	"	.....	.....	.....	.....	.....	.....
Lyell .....	Nipissing ...	"	2	300	.....	.....	.....	2
Lyndoch .....	Renfrew .....	"	3	306	.....	.....	1	1
Matawatchan..	"	"	1	76	.....	.....	.....	.....
Radcliffe .....	"	"	5	614	.....	.....	3	1
Raglan .....	"	"	9	1,025	.....	.....	2	9
Richards .....	"	"	3	400	1	.....	5	4
Sebastopol ..	"	"	1	60½	.....	96	.....	1
Sherwood ....	"	"	5	435	1	4	4	.....
Algona, N....	Renfrew .....	Finlay Watt Pembroke.....	1	199	.....	.....	.....	2
Alice .....	"	"	2	199	1	.....	2	2
Buchanan (pt)	"	"	1	129	.....	.....	.....	.....
Fraser .....	"	"	3	420	2	58½	1	4
Head .....	"	"	.....	.....	.....	.....	.....	.....
Maria .....	"	"	.....	.....	.....	.....	.....	.....
McKay (pt) ..	"	"	.....	.....	.....	.....	.....	.....
Petawawa ....	"	"	5	502	1	4½	2	.....
Rolph .....	"	"	5	559	1	100	2	2
Wilberforce ..	"	"	1	90	.....	.....	.....	.....
Wylie (pt)....	"	"	8	881	.....	.....	3	1
Calvin .....	Nipissing ....	Robert Small, Mattawa. ....	2	190	.....	.....	2	3
Cameron (pt)..	"	"	2	275	.....	.....	.....	1
Lauder .....	"	"	.....	.....	.....	.....	.....	.....
Mattawan.....	"	"	1	172	.....	.....	1	1
Papineau ....	"	"	16	1,844	1	208	12	3
Korah .....	Algoma .. ...	Edw'd Noble, Sault Ste. Marie	.....	.....	.....	.....	.....	.....
Parke.....	"	"	.....	.....	.....	.....	.....	.....
Prince.....	"	"	3	434	.....	.....	3	5
Aberdeen ....	Algoma .....	Thos. Buchanan, Thessalon.	3	483½	.....	.....	1	1
" add.	"	"	.....	.....	.....	.....	.....	.....
Galbraith....	"	"	1	162½	.....	.....	.....	5
Lefroy .....	"	"	.....	.....	.....	.....	.....	.....
Plummer .....	"	"	1	160	.....	.....	.....	.....
" add.	"	"	.....	.....	.....	.....	.....	.....
St. Joseph Is'd	Algoma .....	W. E. Whybourne, Marksville	9	894	2	8½	8	3
Baldwin (pt)..	Algoma .....	Neil Mulvaney, Espanola...	10	1,566	1	3	2	2
Merritt.....	"	"	8	1,062	.....	.....	3	7
Blake.....	Thunder Bay.	W. A. Burows, Port Arthur.	48	7,283	2	240	21	9
Comtee .....	"	"	33	4,883½	1	72½	28	26
Crooks .....	"	"	16	2,189	2	31	10	2
Dawson Road.	"	"	103	10,413	7	192	47	.....
Dorion .....	"	"	12	1,776½	2	200	7	24
Gillies .....	"	"	5	712½	2	151½	4	5
Gorham .....	"	"	35	5,049	1	460½	29	7
Lybster .....	"	"	7	912	4	287	9	5
Marks.....	"	"	11	1,568½	.....	.....	7	4

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
McGregor ....	Thunder Bay.	W. A. Burows, Port Arthur.	20	3,202	5	198	22	7
McIntyre ....	"	"	1	72	...	...	...	4
O'Connor....	"	"	3	445 $\frac{1}{2}$	2	3 $\frac{1}{2}$	3	6
Oliver.....	"	"	2	308 $\frac{1}{2}$	4	191	1	8
Paipoonge,N R	"	"	...	...	...	...	...	2
" S R	"	"	7	878	...	...	8	6
Pardee.....	"	"	3	640	...	...	1	3
Pearson.....	"	"	69	11,252 $\frac{1}{2}$	4	119 $\frac{1}{2}$	27	2
Scoble.....	"	"	26	5,519 $\frac{1}{2}$	4	43	27	5
Stirling.....	"	"	87	13,194	1	80	12	...
Strange.....	"	"	10	1,691 $\frac{1}{2}$	...	...	9	3
Ware .....	"	"	76	11,474 $\frac{1}{2}$	7	289 $\frac{1}{2}$	59	18
Atwood .. .	Rainy River.	William Cameron, Stratton..	...	...	1	1	...	1
Blue .....	"	"	11	1,208 $\frac{1}{2}$	3	7	2	5
Curran....	"	"	6	888	1	4	5	2
Dewart .....	"	"	19	3,116	4	84 $\frac{3}{4}$	5	1
Dilke .....	"	"	1	125	1	2	1	1
Morley.....	"	"	10	1,378	4	10	9	3
Morson .....	"	"	63	7,151 $\frac{3}{4}$	9	461	47	4
McCrosson ...	"	"	13	1,651	7	366 $\frac{3}{4}$	10	4
Nelles.....	"	"	12	1,569 $\frac{1}{2}$	4	10	13	4
Pattullo.....	"	"	16	1,583	4	88	9	6
Pratt .....	"	"	6	997	3	160	4	2
Rosebery ..	"	"	...	...	...	...	...	...
Shenston.....	"	"	3	382	5	58	3	7
Sifton .....	"	"	25	3,617 $\frac{1}{2}$	10	439	20	4
Spohn .....	"	"	38	5,777	5	10	29	...
Sutherland ...	"	"	22	3,462 $\frac{1}{2}$	4	132 $\frac{1}{2}$	16	1
Tait .....	"	"	12	1,710	8	169 $\frac{1}{2}$	7	7
Tovell ..	"	"	20	2,749 $\frac{1}{2}$	3	105	8	2
Worthington..	"	"	2	200 $\frac{1}{2}$	1	4	2	1
Aylsworth ..	Rainy River	Alex. McFayden, Emo .....	1	40 $\frac{1}{2}$	...	...	...	...
Barwick .....	"	"	...	...	...	...	...	1
Burriss .....	"	"	7	1,092	5	117	7	11
Carpenter....	"	"	4	620	2	177	3	4
Crozier.....	"	"	5	740	2	120	7	2
Dance.....	"	"	20	3,178	2	20	19	1
Devlin.....	"	"	1	162	2	4	2	4
Dobie .....	"	"	6	912	3	105 $\frac{1}{2}$	4	5
Fleming .....	"	"	...	...	...	...	...	...
Kingsford ..	"	"	10	1,566 $\frac{1}{2}$	4	109 $\frac{1}{2}$	10	2
Lash.....	"	"	3	447 $\frac{1}{2}$	2	6	3	3
Mather .....	"	"	11	1,742	1	16	8	3
Miscampbell .	"	"	11	1,738	4	199 $\frac{1}{2}$	12	4
Potts .....	"	"	18	2,765 $\frac{1}{2}$	2	81 $\frac{1}{2}$	16	6
Richardson...	"	"	16	2,385 $\frac{1}{2}$	...	...	13	11
Roddick.....	"	"	...	...	...	...	...	...
Woodyatt....	"	"	...	...	...	...	...	...
Aubrey ....	Kenora .....	R. H. Pronger, Dryden .....	8	997 $\frac{1}{2}$	1	71 $\frac{1}{2}$	4	8
Britton .....	"	"	17	2,725	...	...	1	3
Eton .....	"	"	15	2,270 $\frac{3}{4}$	...	...	8	6
Langton .. .	"	"	8	1,246 $\frac{1}{2}$	...	...	4	...
Melgund .....	"	"	5	774	1	7 $\frac{1}{2}$	5	1
Mutrie.....	"	"	8	1,215	1	1	11	4
Rowell .....	"	"	5	720	...	...	...	...
Rugby .....	"	"	3	480 $\frac{1}{2}$	1	52	1	3

## Appendix No. 13.—Concluded.

Township.	District or County.	Agent.	No. of persons located.	No of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Sanford.....	Kenora .....	R. H. Pronger, Dryden...	21	3,191	1	41	13	2
Southworth..	"	"	12	1,867 $\frac{1}{2}$	1	76	9	2
Temple.....	"	"	7	1,138	.....	.....	5	.....
Van Horne....	"	"	10	1,352 $\frac{1}{2}$	.....	.....	6	9
Wabigoon.....	"	"	47	7,345 $\frac{1}{2}$	5	251 $\frac{1}{2}$	33	2
Wainwright..	"	"	12	1,755 $\frac{1}{2}$	.....	.....	11	2
Zealand.....	"	"	45	6,638	1	16	7	6
Melick.....	Kenora .....	W. L. Spry, Kenora.....	13	1,658	2	34	9	7
Pellatt.....	"	"	11	1,381 $\frac{1}{2}$	2	81	8	6
Blezard.....	Sudbury.....	J. A. Lemieux, Blezard	2	317 $\frac{1}{2}$	3	1 $\frac{1}{2}$	3	5
Capreol .....	"	" Valley	10	1,157 $\frac{1}{2}$	3	88	2	5
Hanmer.....	"	"	4	519	.....	.....	2	1
Lumsden.....	"	"	4	636 $\frac{1}{2}$	.....	.....	.....	1
Balfour.....	Sudbury .....	J. K. MacLennan, Sudbury .	4	560	.....	.....	.....	6
Broder.....	"	"	22	3,069 $\frac{1}{2}$	2	.....	11	1
Chapleau.....	"	"	.....	.....	6	1,630	.....	1
Dill.....	"	"	5	786 $\frac{1}{2}$	1	11 $\frac{1}{2}$	.....	3
Garson.....	"	"	7	1,007 $\frac{1}{2}$	1	9 $\frac{1}{2}$	2	1
Morgan (pt) ..	"	"	4	557	1	1 $\frac{1}{2}$	1	2
Neelon.....	"	"	1	163 $\frac{1}{2}$	1	.....	2	3
Rayside.....	"	"	4	438 $\frac{1}{2}$	1	43 $\frac{1}{2}$	.....	3
Appelby.....	Sudbury .....	Emile Langlois, Warren....	6	981 $\frac{1}{2}$	2	13 $\frac{1}{2}$	1	3
Casimir.....	"	"	5	760	2	127 $\frac{1}{2}$	1	5
Dunnet.....	"	"	1	165	1	5	.....	1
Hagar.....	"	"	9	1,437 $\frac{1}{2}$	.....	.....	1	3
Jennings.....	"	"	6	949	.....	.....	.....	2
Kirkpatrick ..	Nipissing ....	"	4	641 $\frac{1}{2}$	2	10 $\frac{1}{2}$	.....	3
Ratter.....	Sudbury .....	"	6	872 $\frac{1}{2}$	1	6	4	2
Caldwell.....	Nipissing ....	J. A. Philion, Sturgeon Falls.	2	230	.....	.....	.....	3
Cosby.....	Sudbury .....	"	10	1,425 $\frac{1}{2}$	2	4	2	7
Grant.....	Nipissing .....	"	10	1,380 $\frac{1}{2}$	.....	.....	1	2
Macpherson ..	"	"	6	876 $\frac{1}{2}$	.....	.....	.....	5
Martland ....	Sudbury .....	"	11	1,739	.....	.....	5	4
Springer.....	Nipissing ....	"	2	456	1	80	1	5
Abinger.....	Lennox and Addington	Charles Both, Denbigh .....	.....	.....	.....	.....	.....	.....
Canonto, S....	Frontenac....	"	1	88	.....	.....	.....	.....
" " N.....	"	"	.....	.....	.....	.....	.....	.....
Clarendon....	"	"	1	97	.....	.....	1	2
Denbigh..	Lennox and Addington	"	3	600	1	2	6	2
Miller (pt.)...	Frontenac....	"	.....	.....	.....	.....	1	1
Palmerston (pt.)	"	"	.....	.....	.....	.....	.....	1
McClintock ..	Muskoka .....	Unattached .....	1	100	3	15 $\frac{1}{2}$	.....	3
Airy.....	Nipissing.....	"	3	291	2	81	.....	1
Finlayson....	"	"	.....	.....	1	10	.....	1
Murchison ....	"	"	2	407	1	7	.....	1
Sabine.....	"	"	6	693	2	300	3	1
			1882	258,371	301	10,867 $\frac{1}{2}$	1125	767



*Appendix No. 14.*

Statement of Municipal Surveys for which instructions issued during the 12 months ending October 31st, 1914.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.
1	McKay, McKay & Webster.	689	Mar. 3rd, 1914	To survey the boundaries or limits of certain parts of the following public highways in the town of Oakville, namely, Dundas Street, from the northwest limit of Sumner Street to the southeasterly limit of the right of way lands of the Grand Trunk Railway Company, and the "6th line road," from the westerly limit of Dundas Street aforesaid to the said right of way lands of the Grand Trunk Railway Company, and to fix the boundaries or limits thereof by durable monuments, to mark the proper lines of the above streets and roads
2	E. G. Barrow. J. J. McKay.. E. G. McKay..	690	Mar. 20th, 1914	To define the limits of Burlington Street in the City of Hamilton by durable monuments planted at the intersections of the base line or Burlington Street with James Street, Hughson Street, John Street, Catharine Street, Mary Street and Ferguson Avenue.
3	E. R. Bingham	691	Apr. 7th, 1914	To survey certain streets in the City of Port Arthur in the District of Thunder Bay, including North and South Water Streets, Cumberland Street, Court Street, and Algoma Street and all intersecting streets between John Street and McVicar Street, and to have the corners of the streets marked by iron bars duly planted thereat.
4	A. S. Campbell	692	Apr. 9th, 1914	To survey the road allowance between the 3rd and 4th concessions south of the base line in the Township of Wolfe Island in the County of Frontenac, across lots 8, 9 and 10, or as much further on either side as may be necessary to find an original post and to plant durable monuments at the angles of the above lots.
5	Speight & Van Nostrand ..	693	May 20th, 1914	To survey part of the town plot of Port Credit in the County of Peel, lying southwest of the River Credit and northeast of Joseph Street in the said village, and to plant stone or other durable monuments at the front and rear angles of the blocks lying in that part of the village, as shown on annexed plan, pursuant to the provisions of the Surveys Act.
6	W. J. Moore..	694	July 24th, 1914	To survey the road allowance between concessions two and three, in the Township of Ross, from the proof line between lots ten and eleven southeasterly to Olmstead Lake, and to mark said road allowance by permanent monuments.

*Appendix No. 15.*

Statement of Municipal Surveys confirmed during the 12 months ending October 31st, 1914.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.	Date when confirmed under R.S.O. 1897, Chap. 181, secs. 10-15, inclusive
1	Thomas H. Dunn	681	Oct. 26th, 1910	To survey the boundary road allowance between the townships of Osnabruck and Cornwall and to have the said boundary marked by permanent stone or iron monuments at the expense of the municipality of the township of Osnabruck, in the County of Stormont.	July 31, 1914
2	McKay, McKay & Webster .....	689	Mar. 3rd, 1914	To survey the boundaries or limits of certain parts of the following public highways in the town of Oakville, namely, Dundas Street from the north-west limit of Sumner Street to the southeasterly limit of the right of way lands of the Grand Trunk Railway Co., and the "6th line road" from the westerly limit of Dundas Street aforesaid to the said right of way lands of the Grand Trunk Railway Co., and to fix the boundaries or limits thereof by durable monuments, to mark the proper lines of the above streets and roads.	July 4, 1914
3	E. G. Barrow.... J. J. McKay..... E. G. McKay.....	690	Mar. 20th, 1914	To define the limits of Burlington Street in the City of Hamilton by durable monuments planted at the intersections of the base line or Burlington Street with James Street, Hughson Street, John Street, Catharine Street, Mary Street and Ferguson Avenue.	Oct. 15, 1914

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 16.*

Statement of Crown Surveys in progress during the 12 months ending October 31st, 1914.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount Paid.
1	Oct. 15, 1914.	E. R. Bingham....	Subdivision of the Township of Upsala, in the District of Thunder Bay .....	\$ c. 2,000 00
2	July 8, 1914.	E. R. Bingham....	Subdivision of part of the Township of Fraleigh, in the District of Thunder Bay .....	
3	July 28, 1914.	Phillips & Benner.	Subdivision of the Township of Jacques, in the District of Thunder Bay .....	3,000 00
4	July 22, 1914.	A. McMeekin.....	Subdivision of the Township of Redvers, in the District of Kenora.....	1,500 00
				6,500 00

GEORGE B. KIRKPATRICK,  
Director of Surveys.

AUBREY WHITE,  
Deputy Minister of Lands and Forests.



*Appendix No. 17.*

Statement of Crown Surveys, completed and closed during the 12 months ending October 31st, 1914.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of Acres.
1	July 4, 1912	Patterson & Byrne .....	Survey of Township of Drayton, District of Kenora .....	\$ c 2,550 75	52,792
2	July 4, 1912	Patterson & Byrne .....	Survey of part of Township of Mattawan, District of Nipissing.	1,052 60	2,016
3	July 15, 1913	J. R. Allen.....	Survey of Township of Stirling, District of Thunder Bay.....	946 55	22,945
4	July 7, 1913	David Beatty ...	Survey of Township of Lowther, District of Algoma .....	77 45	51,860
5	June 30, 1913	H. J. Beatty....	Survey of Township of Schofield, District of Algoma .....	1,742 76	62,559
6	July 10, 1913	J. K. Benner....	Survey of timber berths in the District of Thunder Bay.....	504 75	
7	July 19, 1913	J. S. Dobie.....	Survey of township outlines, Districts of Sudbury and Algoma.	1,641 85	
8	July 2, 1913	J. W. Fitzgerald	Survey of Township of Caithness, District of Algoma .....	1,197 46	57,570
9	July 4, 1913	C. H. Fullerton..	Survey of Township of O'Brien, District of Timiskaming .....	1,669 06	51,970
10	July 3, 1913	J. R. Gill.....	Survey of Township of Talbot, District of Algoma .....	1,409 10	52,364
11	June 30, 1913	Lang & Ross....	Survey of Township of Orkney, District of Algoma .....	1,154 80	57,893
12	July 9, 1913	T. J. Patten....	Survey of Township of Shetland, District of Algoma .....	2,005 24	52,732
13	July 12, 1913	Speight & Van Nostrand..	Survey of Township of Ebbs, District of Algoma .....	2,756 12	62,760
14	July 19, 1913 and Aug. 14, 1913	Sutcliffe & Neelands .....	Survey of outlines of townships, District of Kenora .....	2,576 80	23,054
		Sutcliffe & Neelands .....	Survey of Township of Malachi, District of Kenora .....		
15	Apr. 18, 1913	A. L. Russell....	Survey of land adjoining and north of Townships of Ware, Gorham and McGregor, District of Thunder Bay .....	2,993 47	16,881
16	July 17, 1913	McAuslan & Anderson .....	Survey outlines, District of Kenora	1,565 40	
17	Mar. 15, 1913	E. Seager .....	Survey of Timber Berth K. 11, District of Kenora .....	204 95	
18	July 30, 1914	E. Seager .....	Survey of Timber Berths K. 28, 29 and 30, District of Kenora.....	895 70	
19	Feb. 14, 1914	W. Smith .....	Survey of fallen timber at Burwash Lake, District of Sudbury.	484 29	
20	Mar. 12, 1914	F. C. Lane .....	Survey of fallen timber at Burwash Lake, District of Sudbury.	428 30	
21	Mar. 10, 1914	J. S. Dobie.....	Survey of Timber Berth A., Mississauga Forest Reserve, District of Algoma .....	408 85	
22	July 23, 1914	C. H. Fullerton..	Survey of water power on Blanche River, District of Timiskaming.	197 70	
23		Jas. Hutcheon ..	Examination of land in rear of Hastings Road and water power on Victoria Creek near Larder Lake .....	43 30	
			Rice Lewis & Son, iron posts.....	190 00	
			Capt. J. White, examination sand and gravel, Pelee Island .....	22 60	
			C. Tarling, mounting maps.....	26 35	
			E. H. Harcourt & Co., lithographing .....	1,250 00	
				29,996 20	567,396

GEORGE B. KIRKPATRICK,  
Director of Surveys.AUBREY WHITE,  
Deputy Minister of Lands and Forests.

*Appendix No. 18.*

## SURVEY OF TOWNSHIP OUTLINES IN THE DISTRICTS OF ALGOMA AND SUDBURY.

THESSALON, Ontario, November 22nd, 1913.

SIR,—In accordance with your instructions dated July 19th, 1913, I have made a survey of certain township outlines in the districts of Algoma and Sudbury, and beg to submit the following report.

The starting point for this survey was the north-east corner of township 7 D, the north boundary of which was run by myself in the year 1910. From this point a base line was run due east on six mile chords of a parallel of latitude, to intersect the meridian line run by O.L.S. Niven in 1902, at a point 4.49 chains south of the 30th mile post. A meridian line run by O.L.S. Patten in 1910, was intersected at a point 6 miles 1.40 chains east of my original starting point. From this point, which is the north-east corner of township 7 C, a meridian line was run north a distance of six miles. From the end of each succeeding six mile chord, a meridian line was run both north and south, a distance of six miles, more or less. The meridian lines running south were run as far as the intersection with the base line run by O.L.S. Niven in 1902. The meridian lines running north were intersected by a base line run by myself later in the season. The meridian line running north between township 8 A and 8 Z, was run a distance of six miles, and from the end of this meridian, a base line was run east a distance of 5 miles, 57.58 chains, to intersect the meridian line run by O.L.S. Niven in 1902, at a point 4.05 chains south of the 36 mile post. The same base line was run west on a series of six mile chords, to intersect the meridian line run by O.L.S. Patten in 1910, at a point 30 links north of the six mile post. This base line intersects the meridian lines previously described.

At each of the township corners formed by the intersection of these base and meridian lines, an iron post was planted, and marked with the numbers of the adjoining townships. At the end of every third mile on both base and meridian lines, a similar iron post was planted, and marked IIIM on the south side in the case of a meridian line, and on the east side in the case of a base line. Wooden posts of the best timber available were planted alongside these iron posts and similarly marked. Wooden posts were planted at the end of each mile, and when the end of a mile came in the water, the post was planted on the nearest shore, and the chainage was marked upon it. The end of each half mile was also marked by a wooden post with the chainage carved upon it. The posts were all marked on the south side in the case of a meridian line, and on the east side in the case of a base line. Bearing trees were marked wherever possible, and the distance and bearing of of the bearing tree from the post recorded in the proper place in the field notes. Mounds of stone were erected around the posts wherever it was possible to obtain them.

The lines were all run with a transit, and observations for azimuth were taken every clear day on the line. For this purpose a Waltham sidereal watch was carried, and checked at frequent intervals. The transit used on this work has an object glass sufficiently powerful to permit of observations being taken on Polaris in the daytime. The results of the observations are entered in their proper places in the field notes.

The lines are all well cut out and blazed, and every care was taken to see that the survey was performed in a proper manner.

## GENERAL CHARACTERISTICS.

The territory embraced within the limits of this survey as a whole, is rough and hilly. It is considerably broken with rock ridges, and with hills of gravel and boulders of glacial origin. As a whole, however, the country is not as rough as that a few miles further south, the rock ridges not being so high nor so numerous. The amount of land suitable for agriculture is very small. There are a few small areas of sandy loam, but these are isolated, and so scattered that nowhere within the limits of the area surveyed would it be possible to develop an agricultural industry.

## TIMBER.

These townships as a whole are well timbered with a mixed growth of the timber characteristic of this country. There is very little red or white pine, and what there is occurs in scattered trees throughout the other timber. The best white pine encountered is in townships 7 Z and 8 Z. There are a few scattered trees near the west boundary of townships 7 C and 8 C, but in comparison with the large area embraced within the area surveyed, the amount of red and white pine is very small. The most valuable timber is jack pine and spruce. The amount of jack pine is very large, and the timber is of splendid quality. The trees in many places grow very thickly, and are large and straight. Some of the best tie timber I have ever seen is to be found within the limits of these townships. There is also a large quantity of very good spruce. There are very few large spruce swamps, the best spruce being found on the higher ground, growing amongst other timber. The remaining timber on the unburnt areas, is a mixed growth of balsam, white birch, poplar, etc. Fire has done a great deal of damage in this section of the country, and every township has suffered to a greater or less extent. It is noticeable that the fires for the most part seem to have occurred along the canoe routes, and some of them have run for long distances. Some of these fires have occurred many years ago, and the second growth is now grown up to a considerable size, although it is very noticeable that the second growth timber is nowhere of as good quality as that which grows on the portions which have escaped the fire. Other fires have been of more recent origin. One large fire has over-run a considerable area in townships 8 A and 8 Z not very long ago, as the timber is not yet all fallen, and the second growth is still very small.

## WATER.

The territory lying within the limits of this survey is well watered with numerous small lakes and streams. It is practically all drained by the various tributaries of the Mississauga river, only a small area at the extreme east end of this territory being tributary to the Spanish river. The Wenebagon river, which has an average width of about one chain, runs through townships 7 C and 8 C. The Kebsquasheshing river, which forms part of the canoe route to the Wenebagon river from the main line of the Canadian Pacific Railway empties into the Wenebagon river in township 8 C. The Embrass river joins the Wenebagon river in township 7 C, and drains a number of lakes, some of which are fairly large. In townships 8 A, 8 Z and 7 Z, there are a number of lakes of considerable size, the waters of which flow to the Mississauga river, probably by way of White Owl lake. There is a canoe route via these lakes from the fire ranger's headquarters at Green lake to the Wenebagon river. This route is much used by the fire rangers, and the portages are all well cut out. The portages are very numerous, however,



and during the time that this survey was in progress, the water in the creeks connecting these lakes was very shallow. In several cases it was necessary to cut out new portages around these creeks, as there was not enough water to float a loaded canoe. Most of these creeks could be used for driving timber, with some improvements, as an abundant supply of water for this purpose could be stored in the various lakes.

#### WATER POWERS.

The water powers are not of great importance in this section, as this territory is fairly close to the head waters of the streams flowing through it. There is one fall on the Wenebagon river in township 7 C, where the river drops about 30 feet in 25 chains, and a dam could easily be erected which would considerably increase the head. Wenebagon lake would make a splendid storage reservoir. This is the only power of any importance that could be developed in this territory. There are other small falls, but they are relatively unimportant.

#### MINERALS.

The prevailing geological formation is Laurentian. The rock exposures are nearly all granite, in some cases with very coarse crystals of feldspar. The granite is intersected in many places with dikes of fine grained trap. In most cases the contact of these dikes with the granite is so tight that the adjoining rocks are almost fused together. No minerals of any economic value were observed during the progress of the survey.

#### FISH AND GAME.

Most of the lakes within the limits of the survey are well supplied with fish. The net which was supplied by your Department was set whenever it was possible, although more fish were caught with a troll than with the net. All the lakes where fishing was tried contain pike. Embrass lake and the large lake through which the north boundary of township 7 Z passes, contain whitefish and suckers. The whitefish caught by us, however, were small and of poor quality. Marion lake and the large lake in the south-west corner of township 8 Z are said by the Indians to contain lake trout, but we were not successful in catching any. Moose are very plentiful, and a few deer were seen; also some traces of bear. The ordinary small fur-bearing animals appear to be quite plentiful, and beaver are becoming very numerous. The ordinary ruffed grouse, or partridge have shown an extraordinary increase in numbers during the last few years, and are now very plentiful.

The magnetic variation is fairly constant at an average value of about 4 degrees 30 minutes.

Herewith are included field notes, a plan on mounted drawing paper, a timber plan on tracing linen, and accounts in triplicate, all properly attested.

I have the honour to be, Sir,

Your obedient servant,

(Signed) JAMES S. DOBIE,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

*Appendix No. 19.*

## SURVEY OF TOWNSHIP OUTLINES IN THE DISTRICT OF KENORA.

NORTH BAY, Ont., September 24th, 1913.

SIR,—We beg to advise the completion of the survey of certain township outlines performed under instructions from your Department bearing date of July 17th, 1913, and to submit thereon the following report:

The survey was commenced, according to the instructions, at the iron post marking the north west angle of Rowell township, from which point No. 2 base line was run west astronomically on 6 mile chords a distance of twenty-four miles. From the 6 mile post on this base line, our No. 1 meridian was run south astronomically to Rosamond lake, and triangulated connections were there made with the posts planted by O.L.S. MacDougall in the survey of the township of Rugby, to mark the extremities of the west and north boundaries of that township. We find, that had these two lines been produced, they would have intersected on the mainland, instead of in Rosamond lake as was shown on Ruby township plan. These triangulations are reduced and the connections illustrated in the field notes.

No. 2 meridian was run south astronomically from the 12 mile post on No. 2 base line, to the intersection with the north boundary of the township of Mutrie. From the 6 mile post on this meridian No. 1 base line was run east astronomically on a six mile chord to an intersection with No. 1 meridian, and run west astronomically in a similar manner to an intersection with No. 3 meridian.

From the 18 mile post on No. 2 base line our No. 3 meridian was run south astronomically to an intersection with the north boundary of Wabigoon township; and from the 24 mile post on No. 2 base line, which point occurs on an island in Clay lake, our No. 4 meridian was run south astronomically to an intersection with the north boundary of Smellie township.

Iron posts, properly marked with a cold chisel, were planted at intervals of 3 miles along our lines, while 6 inch posts of spruce or jack pine at intervals of 1 mile; and 4 inch posts of spruce or jack pine at intervals of half a mile were suitably scribed and planted. Wherever possible these posts were mounded with stones and bearing trees marked and noted. Some few extra posts were planted at irregular chainages, to mark the intersection of our lines with shore lines the same being properly recorded in the notes. Frequent astronomic observations for azimuth were taken and are recorded in the notes, numerous magnetic observations were also made from which latter the magnetic variation was found to average N. 10 degrees E.

## GENERAL FEATURES.

A very large percentage of the area embraced by this survey is very barren, rough and rocky, and almost the entire area has been fire swept. In the first instance this has very probably occurred during the construction of the Canadian Pacific Railway and again about six years or so ago. Much of the timber as a result of this former fire has fallen down and is a tangle, thickly up grown with small young jack pine. Small areas of clay of a high quality are mingled with these mountains, but so restricted in area, and so scattered, as to raise the question as to whether community farming would be practicable, excepting in those areas lying adjacent to the Grand Trunk Pacific Railway. Again, restricted areas of good jack pine of a fair size coupled with unrestricted areas of thicket growth of small

jack pine make the question of setting aside this area for a timber reserve worthy of consideration. Clay lake occupies a large area of the north-west corner of the township of Redvers, and a large number of islands occur in this lake within the limits of this township. Along this lake and the Wabigoon river there is a wide deposit of good soil and this township, particularly the south-westerly and westerly portions of it, forms a very favorable proposition for subdivision.

#### SOIL.

The soil is in most cases of a clay loam, very little of heavy white clay being encountered. Again our lines crossed many small sandy flats scattered among the mountains. The clay is of a light loam, and from evidences seen, of a high order of productiveness.

#### TIMBER.

As before mentioned jack pine is the predominating timber, the vast majority of it being at present too small for commercial purposes. There are, however, small areas of it sufficiently large in dimensions to be used for railway purposes. In the swamps are spruce of suitable dimensions for pulp wood while in a few instances Norway pine of a fair dimension were encountered, but these are a negligible quantity.

#### ROCK.

The country rock is red granite showing abundant evidences of past glacial action. No contacts were observed, nor economic minerals encountered.

#### LAKES.

Many lakes were encountered, small in area but all stocked with fish, the chief varieties being pike, pickerel and maskalonge. Unfortunately through the carelessness of the express company's officials at Sioux Lookout we did not get the net sent in to us by the Game Wardens' Department until too late for us to make use of. The varieties enumerated were caught by hand lines.

#### GAME.

Large game is very plentiful and moose, caribou, red deer and bear were seen daily during the progress of the work. Small fur is also very abundant and trapping is reported to be quite profitable.

Accompanying this report are plan, field notes, accounts in triplicate, etc., all of which are respectfully submitted for your approval.

We have the honour to be, Sir,

Your obedient servants,

(Signed) MCAUSLAN & ANDERSON,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ontario.



*Appendix No. 20.*SURVEY OF TOWNSHIP OUTLINES OF PELICAN, MALACHI AND RICE, IN THE  
DISTRICT OF KENORA.

NEW LISKEARD, Ontario, March 11th, 1914.

SIR,—In compliance with your instructions bearing date of July 19th, 1913, I proceeded to Kenora where provisions and three canoes were purchased, and the following day started down the Winnipeg river. Through the kindness of Mr. Frazer, Government Road foreman, I was able to get part of our supplies and men taken to Smith's farm by gasoline launch. From this point our supplies were portaged to Culloden lake and thence by canoe to west end of same, which was within ten chains of starting point.

The first night an observation was obtained, and the following day while supplies were being brought up and everything gotten in shape for action I scouted the country west of this point for four or five miles and discovered the portages and canoe route which was very convenient to our work. After cutting two miles, I moved camp and supplies to Catharine lake, from which place the cook and one or two men moved everything by canoe for almost the entire survey; while, with four men on line and my assistant and one chainier following, we ran west ten and a half miles. I then moved north along Pelican Pouch lake, carrying along first meridian. From our camp at north end of Pelican Pouch lake I took fly camp via timber road most of the way to Long lake, fortunately striking it at the most westerly point about five chains from where the second base line afterwards crossed. I immediately had one canoe brought ahead and the same night my assistant, picket man, and I camped at the north-west angle of Umbach township where an observation was obtained, and the following day we ran 2nd base line to Long lake, and thence on to Otter where we discovered that a canoe route led around to the north of our line to Long lake. I doubt, however, if we could have gained any time by using same.

When I closed in the first township, i.e., Pelican, I found that my angle at the north-west angle of same was theoretically correct, but found the chainage three chains and forty-eight links shorter than south boundary of Pelican. After checking over all the triangulation and finding no error—the chainiers taking particular care in trying to see how close we could close—we decided that the error might possibly be in the west boundary of Umbach, and accordingly, started chainage again from north west corner of Pelican, thinking that position of posts might be confusing if subdividing to the north in the future. The one-half mile posts were afterwards removed on advice from Mr. L. V. Rorke, for same reason.

The second base line was run ahead to North Scott lake and left until we moved to south end of Malachi lake, from which point the 1st base line was picked up and run out to end of twelve miles. We then ran second meridian north to 2nd base line, closing 80 links west of 6 mile post and 14 links long on second meridian. I discovered the following night that the 2nd base line at this point was running 3 minutes north of the theoretical bearing, checking with chainage of 2nd meridian. Accordingly, I decided to run line straight ahead as it was then running within  $1\frac{1}{2}$  minutes of bearing for last six mile chord.

My assistant then started traverse of Malachi lake, first making triangulation survey of same and later connecting points of traverse by detailed traverse of shore line, while with a fly camp I finished 1st base line, hitting eight chains and

seventy links north of 30th mile post on Manitoba boundary, the south boundary of Rice being five miles, sixty-five chains and eighty-seven links. Returning I moved camp to north end of Malachi lake where canoe route was used via North, Scott, and Moose lakes in finishing 2nd base line, hitting Manitoba boundary nine chains and seventy links north of 36th mile post; the chainage of north boundary of Rice being five miles, sixty-four chains and eighty-four links.

I do not consider it wise to subdivide the remaining townships, as a very small percentage of the land is good. Where patches do occur, the soil is generally very fertile and the timber large, but the country for the most part is bare rock or sand, or rock with a very light overburden.

#### PELICAN TOWNSHIP.

Practically the whole south boundary of Pelican township ran through small second growth poplar and jack pine; bare rock being visible much of the distance. At the south east angle of the township there was a small area of good agricultural land, and another small strip where the Government Road passes through. The north boundary runs through heavier timber, which the fire has not passed through. There is a fairly good section of land lying between Long lake and Trout lake. Another small section of land along the west boundary of Pelican between Malachi township and Pelican Pouch lake is arable in spots, particularly the northern part.

I covered most of the southern, northern and western, and eastern sections of this township, but there is six or eight square miles in the centre that I was not through.

Along the eastern side of the southern part of Pelican Pouch lake the land is fairly regular with a fairly heavy overburden of sand, on which grows fairly large jack pine.

The Government Road through Pelican township, I firmly believe passes through by far the best part of it.

#### MALACHI TOWNSHIP.

Malachi township has considerable good timber, much of which, however, has been removed, but there still remains much good jack pine, especially along the western and southern sides of Malachi lake, and south of Duck lake across the south boundary; in other words, that section of the township south-west of a line from Muddy lake on the south to Malachi station.

East and north-east of Duck lake at least one and a half square miles is bare rock, on which scarcely anything but blueberries grow; these, however, are very plentiful and tons are shipped yearly from this spot.

The remainder of the township is covered for the most part with small jack pine and poplar.

This township, like Pelican, has a small percentage of good clay land.

#### RICE TOWNSHIP.

Rice township in some respects is similar to Pelican. The south boundary from M.14 to the boundary, running through light timber and over bare rock. The eastern section has some very good timber, and also, the northern—with the exception of the last two miles near the Manitoba boundary, which is light.

I found, in a general way, the best timber and the best land adjacent to the large lakes.

There is possibly from five to ten per cent. clay soil; from twenty to thirty, sandy soil with rock outcroppings; and the remainder bare rock, or barely covered.

#### FRUIT.

We found wild plums and blueberries in considerable quantities, and raspberries occasionally, but fruit should be a pretty fair crop.

#### GAME.

Moose, red deer, and caribou are plentiful, as well as porcupine and rabbits. We saw several mink and muskrats, but no recent trace of beaver. Coyotes seemed fairly plentiful but we only heard them.

#### FISH.

According to your instructions, we set the net whenever and wherever possible, but Malachi lake seemed the only lake in which we were successful. Large pike and pickerel seem quite abundant, and the Indians say white fish, too, are plentiful, but rather difficult to catch during the summer months.

In Pelican Pouch lake we caught only suckers and these seemed plentiful.

The water in this lake is very clear but becomes covered with a green scum at least one-half inch in thickness during August and September.

In Clear lake and Trout lake we saw dead trout lying on the shore.

We used the troll on Catharine and Otter lakes but with little success.

#### ROCK FORMATION.

We examined this carefully along all the lines and found nothing but Laurentian granite. In the southern part of Pelican township it was of a reddish color, containing much feldspar and large veins of smoky quartz, but of a very hungry and glassy nature.

The formation to the north and particularly along the Grand Trunk Pacific Railway, was somewhat grey in color and appeared to break readily along horizontal seams.

We carefully noted all rock met with and found no trace of economic minerals.

Accompanying this report, please find plan on mounted paper, and timber plan. We are sending in traverse of Malachi lake on mounted paper as well as on tracing linen, with plan of subdivision of Malachi township—the second contract.

Trusting that our returns meet with your approval.

We have the honour to be, Sir,

Your obedient servants,

(Signed) SUTCLIFFE & NEELANDS,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ontario.



*Appendix No. 21*

## SURVEY OF THE TOWNSHIP OF CAITHNESS, DISTRICT OF ALGOMA.

PETERBOROUGH, December 29th, 1913.

SIR,—I have the honour to report the completion of the survey of the township of Caithness in the District of Algoma performed under instructions from your Department dated July 2nd of this year. I beg to submit also the field notes and plan of the township all of which I trust will be found complete and satisfactory.

As instructed I commenced the survey proper at the south-east angle of the township, from this point I chained westerly along the south boundary, giving to each of the lots a width of twenty-five chains and twenty-five links from lot one to thirty, inclusive. Lot thirty-one being thirty-seven chains and eighty-seven links. A half road allowance of fifty links was allowed for east of lot one and a full road allowance of one chain between lots six and seven, twelve and thirteen, eighteen and nineteen, and twenty-four and twenty-five, a half road allowance was also allowed for along the east side of the west boundary, the side lines in the centre of the road allowances between lots six and seven, twelve and thirteen, eighteen and nineteen and twenty-four and twenty-five. I ran due north astronomically from the south to the north boundary of the township. To each of the regular concessions I gave a depth of fifty-nine chains and fifty links, leaving a road allowance of one chain between concession two and three, four and five, six and seven, eight and nine and ten and eleven, a half road allowance of fifty links was also allowed for along the north side of the south boundary line and along the south side of the north boundary line. The concession lines in the centre of the road allowances, between concessions two and three and six and seven, were run from the exact points on the east boundary of the township due west astronomically to the west boundary, while the concession lines in the centre of the road allowances between concessions four and five, eight and nine and ten and eleven were run due east astronomically to the east boundary, and due west astronomically to the west boundary, from points established on the line in the centre of the road allowance between lots six and seven. Good posts made of the most durable wood to be had in the vicinity were firmly planted along the various concession lines, between the lots—one on the line itself as a guide post with the number of the lots cut on the east and west sides and the letter R cut on the north and south sides—one fifty links north of the guide post with the numbers of the lots cut on the east and west sides, and the number of the concession or R cut on the north or south sides as the case may be, at the intersection of the centre lines of the different side road allowances with the centre line of the different concession road allowances—good posts were also planted with the letter R cut on the north, south, east and west sides, good posts were also planted at the angle of each of the four adjoining lots with the number of the concession cut on the north or south side as the case might be, and the number of the lot cut on the east or west side as the case might be, and the letter R cut on the two sides facing the concession and side road allowances—these posts were planted at a distance of fifty links from the centre of the side road allowance and fifty links from the centre of the concession road allowance. Where the front angle of a lot fell in a lake or in the Mattawitchewan river the posts were projected to the proper points on the north or south or on the north and south sides thereon—these posts were

planted at a perpendicular distance of one chain from high water mark—witness posts with the numbers of the lots marked on the east and west sides were also placed at high water mark, and where they were to be had several trees in the vicinity were blazed in a conspicuous manner. A road allowance of one chain in perpendicular width is allowed for along each side of the Mattawitchewan river, also around all large lakes and around all lakes cut by the concession and side road allowances—all these road allowances are marked by good durable posts planted on the lines of survey with the letter R cut on the sides facing the road allowances. To all posts—with the exception of the guide posts—the witness posts—and the posts defining a road allowance—suitable bearing trees were marked—full descriptions of which will be found in the field notes. In order to make the survey more permanent in case of the destruction of the wooden posts by fire—iron posts made of iron tube one and one quarter inches in diameter—three feet long and painted red were placed at the points indicated I.P. on the township plan, these posts were marked with a cold chisel similarly to the wooden posts alongside of which they stand.

The township of Caithness is well watered by the Mattawitchewan river and several smaller streams which enters it on its course across the township. The river has an average width of about two chains and fifty links and varies in depth from a few inches to four or five feet—for the greater part of its way across the township it is made up of a succession of shallow rapids filled with boulders and remarkably sharp edged rocks, so much so that it can scarcely be said to be navigable in any sense of the word even for canoes. The water of the river is clear and of good quality and contains some averaged sized pike. One small water power with a head of four feet ten inches occurs on lot twenty-seven, concession eight, immediately north of the line in the centre of the road allowance between concessions eight and nine, particulars, etc., of which will be found in the traverse notes.

A stream called the Goat river which has a fair current and an average width of about eighty-five links enters the river from the south at lot thirty, concession five—the water in this stream which varies in depth from a few inches to three or four feet is pure and clear and contains some fair sized speckled trout.

There is only one lake of any importance in the township situated near its south east angle this is called Big Pike lake, this lake is almost land locked having no inlet or outlet of importance, the water which is pure and of good quality is of a greenish tinge and up to ten feet in depth—some good sized pike were procured in this lake.

The whole of the township of Caithness may be described as a more or less rolling country timbered with spruce up to fourteen inches in diameter, balsam of gilead up to sixteen inches in diameter, poplar, white birch, balsam and cedar of an average size and quality. The undergrowth consists for the most part of alder and willow, while here and there considerable windfall is met with. Interspersed throughout are swamps covered with spruce and dead tamarac, and as a rule, grown up with a dense growth of alder. All these swamps have a considerable elevation above the waterways and will admit of very easy drainage. On the uplands, generally speaking, the soil is a black loam rich in humus and of from eight to twelve inches in depth entirely free from stone with a subsoil of clay. Quite a few outcroppings of rock (Huronian) but very limited in extent are met with, particularly around Big Pike lake and along the south boundary. I found no traces of mineral whatever. The average magnetic variation is about six degrees and fifteen minutes west of north. I would consider about fifty per cent. of this

township suitable for immediate settlement, and there can be no doubt that by a proper drainage of the swamps twenty-five per cent. of the remainder can be made suitable for agriculture. Game and fur of the usual kinds common to this section, and particularly moose, are to be seen in abundance.

Observations for azimuth on Polaris at elongation were taken at least once a week with the exception of the last two weeks of the work, which was almost a continuous downpour of rain. All the lines were run with the transit, well opened up and blazed, and carefully chained and posted by experienced hands. A careful traverse survey of the Mattawitchewan river and also of the lakes was made with the micrometer and transit, all the work closing in a very satisfactory manner.

I have the honour to be, Sir,

Your obedient servant,

(Signed) J. W. FITZGERALD,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

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*Appendix No. 22.*

**SURVEY OF THE TOWNSHIP OF EBBS, DISTRICT OF ALGOMA.**

TORONTO, December 22nd, 1913.

SIR,—We have the honour to submit the following report on the survey of the township of Ebbs, in the District of Algoma, made by us under instructions from your Department, dated the 12th day of July, 1913.

On 29th July we left Toronto, via the Canadian Pacific Railway for Franz, where the party was organized. The party was in charge of John van Nostrand, O.L.S., assisted by N. A. Burwash, O.L.S., and included five other men from Toronto and vicinity, and eleven men from Missinabie and Franz. We then proceeded to Oba by construction train on the Algoma Central Railway. From the railway the party and supplies were taken down the Albany Branch of the Oba river in canoes to the falls, a short distance above the line between lots 6 and 7, in the township of Scholfield. The supplies and camp outfit were then packed to that line and north along it to the line between concessions X and XI, then east to the east boundary and north on the east boundary, to the starting point of the survey, at the south-east corner of the township of Ebbs, in all, a distance of seven miles, more or less.

The township is bounded on the south by the township of Scholfield, and on the east by the township of Orkney, on the north by the townships of Lowther and Shetland, and on the west by the unsurveyed township of Templeton. The Algoma Central Railway passes about four chains west of, and fifteen chains north of the north-west corner of the township and runs in a north-easterly and south-westerly direction from this point, which is about twenty miles from the town of Hearst.



The part of the Albany Branch of the Oba river travelled over is at this time of the year a very shallow stream filled with large sharp boulders and shallow bars, and it was found necessary to load nineteen foot canoes to not more than half capacity in order to get them through at all. In fact, the part of the river between the line between lots 6 and 7, in the township of Scholfield, and the east boundary of that township, was reported to be in such bad condition that no attempt was made to travel over it.

The survey was commenced on 11th August and completed on 2nd October.

On arriving at the starting point it was found that the line forming the south boundary of the township or Orkney had not been run to its intersection with the east boundary of the township of Scholfield.

Proceeding as instructed we went east and picked up this line at the nine mile post and produced it west seventy-nine chains and eight links to the above-mentioned intersection.

From the point thus established the east boundary of the township of Ebbs was run north astronomically to the south boundary of the township of Shetland, thus establishing the north-east corner of the township of Ebbs, and the south boundary was run as an eleven mile chord of a parallel of latitude west to the west boundary.

All lines were run with the transit and frequent astronomical observations, the record of a number of which are appended, were taken to verify the courses of the lines run. All lines were well opened out and blazed.

Wooden posts of the most durable timber obtainable were planted at the points required by the instructions.

Iron posts, one and one-quarter inches in diameter, furnished by your Department, were planted alongside the wooden posts, at the following points:—

- At the south-east corner of lot 13, concession I.
- At the south-west corner of lot 24, concession I.
- At the south-east corner of lot 1, concession V.
- At the south-west corner of lot 12, concession V.
- At the south-west corner of lot 24, concession V.
- At the south-west corner of lot 34, concession V.
- At the south-east corner of lot 1, concession IX.
- At the south-west corner of lot 12, concession IX.
- At the south-west corner of lot 24, concession IX.
- At the south-west corner of lot 34, concession IX.
- At the north-east corner of lot 1, concession XII.
- At the north-west corner of lot 12, concession XII.
- At the north-west corner of lot 24, concession XII.

A traverse was made of a small lake in lots 27 and 28, concession X, this being the only lake seen in the township.

#### SOIL.

The soil in nearly the whole of the township is sandy, generally low-lying and wet, with a few dry patches. The wet land is covered with from twelve inches to thirty inches of moss and peat, and the dry land with from two inches to twelve inches of moss. The exceptions to this are the large muskeg areas which occur in the western part of the township, as shown on the plan and field notes, also occasional gravel beds. Not more than ten per cent. of the soil, in our opinion, is suited for ordinary agricultural purposes.

## TIMBER.

The timber, except in the muskeg areas, is chiefly spruce, with tamarac (dead), poplar, birch, balsam and cedar. The spruce, tamarac and balsam average about five inches in diameter and are not of much commercial value. The poplar and birch occur on the drier ground in small areas and run from four inches to twelve inches in diameter. The cedar is small and scrubby.

The timber in the muskeg is stunted tamarac and spruce up to three inches in diameter.

The whole country shows evidence of having been fire-swept sixty or seventy years ago, and the timber has not since obtained its full growth.

## MINERALS.

No economic minerals were seen but in a great many places small stringers of milky quartz occurred in the greenstone outcroppings. A number of samples of the country rock accompany this report.

## GAME.

Moose and caribou were very abundant, several moose being seen during the progress of the survey. A few fresh beaver cuttings were seen in the north-west part of the township, but they do not appear to be very abundant. Marten were also seen. Spruce partridge were abundant, and pin-tailed prairie chickens were seen, exclusively in the muskeg areas. Rabbits were plentiful. No fish of any kind were obtained, the streams being too small.

## WATER POWER.

No water powers occur in the township.

## GENERAL.

In the south-east corner of the township all the streams are small, and are tributary to the Albany Branch of the Oba river. In the south-west corner of the township there is a large stream fifty links wide and three feet deep, with a fairly rapid current. This is a tributary of the Mattawisquia river. In the northern half of the township all the streams are small except for two fairly large creeks which rise in the township and unite after leaving it to form the Beaver river. These streams afford good natural drainage for the land within their influence, except the muskeg areas which would require considerable work to drain.

The general topography is almost level, with very gentle undulations and low outcroppings of greenstone rocks which do not rise much above the general level.

The returns accompanying this report comprise a general plan, a timber plan, field notes of the entire survey, also account in triplicate.

We have the honour to be, Sir,

Your obedient servants,

(Signed) SPEIGHT & VAN NOSTRAND,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 23.*

## SURVEY OF THE TOWNSHIP OF LOWTHER IN THE DISTRICT OF ALGOMA.

PARRY SOUND, December 16th, 1913.

Sir,—I have the honour to submit the following report on the survey of the township of Lowther in the District of Algoma, performed under instructions dated the 7th of July, 1913.

I proceeded to my work by way of Cochrane and thence by Grand Trunk Pacific Railway to Hearst and from there I moved into the township of Lowther along the grade of the Algoma Central and Hudson Bay Railway, and commenced my survey at the north-east angle of the township at the post planted by Ontario Land Surveyors Sutcliffe and Neelands and chained westerly along the north boundary making each lot 25 chains and 25 links wide, excepting lot 6 which I made 24 chains and 94 links wide, allowing for convergence of meridians across the township; here I observed Polaris for meridian and ran the centre line of road allowance between lots 6 and 7 due south, making said line my base for starting the several concession lines throughout the township running east and west.

This township was surveyed under the new method of survey approved of by Order in Council dated April 24th, 1906. Under this system I surveyed 12 concessions numbering from south to north with a road allowance of 50 links wide on each side of the outlines of the township and one chain wide between every second concession, namely between concessions 2 and 3, 4 and 5, 6 and 7, 8 and 9, etc., and a blind line between the other concessions namely, 1 and 2, 3 and 4, 5 and 6, 7 and 8, etc., with a road allowance 1 chain in width between every six lots, the lots being numbered from east to west.

This township was laid out with a double front on each concession road allowance run on the ground. I ran the concession lines in the middle of the road allowance between each alternate concession as chords of a parallel of latitude passing through the township corners and the side lines between every sixth and seventh lot in the middle of the road allowance on a course north astronomically.

I planted firmly in the ground at the front angles of the lots at right angles from my centre line of the concession road allowance, durable and substantial posts of the dimensions given in the general instructions, at the distance of 50 links on each side north and south of my line. I also planted posts in the centre of my lines of survey as guide posts. These posts were marked as per instructions. At the intersection of the centre of the different side road allowances with the centre line of the different concession road allowances I planted a post marked "R" on each of the four sides.

The Algoma Central and Hudson Bay Railway extends in a general north-easterly direction across the north-west angle of the township. I allowed a road allowance one chain in width, along each side of the right of way. The line of the said railway has been accurately plotted on the plan accompanying this report. Road allowances, one chain in width, were also left about the several lakes met with in the survey of the township, these being posted as per instructions. In chaining the boundaries of the township I noted the chainage to all survey posts planted on these lines in former surveys and have shown in the field notes of my concession and side lines the amount of jog which my lines made with those in the adjoining townships.



In surveying the side road allowances I did not plant posts at the blind concession lines, but gave the adjoining concessions an equal depth, assigning to each half the distance between alternate concession road allowances.

My lines of survey were well cut out and well blazed and all of the lines were run with the transit. Astronomical observations for the meridian were taken at least once a week to verify the direction of my lines. The field notes were kept as per instructions.

With a view to making the survey permanent in case of fire I planted alongside the wooden posts an iron post at the points indicated on the projected plan accompanying my instructions. These posts were marked with a cold chisel similarly to the wooden posts alongside which they were placed.

All waters within the limits of my survey were surveyed and connected with my lines of survey whether or not such waters were intersected by the concession or side lines run by me. The survey of these lakes has been plotted on a scale of ten chains to the inch and accompanies this report.

#### TIMBER.

The timber throughout the township is spruce from 4 to 10 inches in diameter, excepting some small areas of poplar and white birch, as shown in the field notes.

#### SOIL.

The soil is clay with some small areas of lighter soil in the vicinity of outcroppings of granite rock which occurs in a few places as indicated in the field notes. There is considerable swampy ground but very little muskeg, and the swamps will all be easily drained as the creeks and water courses are considerably below the general surface of the ground.

#### MINERALS.

I saw no indication of mineral in the township.

#### LAKES.

There are only a few small lakes in the township and I doubt if there are any fish; at least we were not able to catch any with hook and line.

#### GAME.

The only game I saw in the township was moose.

I have the honour to be, Sir,

Your obedient servant,

(Signed) DAVID BEATTY,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 24.*

## SURVEY OF THE TOWNSHIP OF ORKNEY, DISTRICT OF ALGOMA.

SAULT STE MARIE, ONT., January 20th, 1914.

Sir,—We have the honour to submit the following report on the survey of the subdivision of the township of Orkney, in the District of Algoma, made by us under instructions from your Department of July 2nd, 1913.

We arrived at Franz on the Canadian Pacific Railway on the morning of July 13th, and proceeded northward on a construction train to Oba on the Algoma Central Railway. From this point we canoed down the Little Albany river to the south-east angle of the township of Orkney and commenced work on July 18th.

We ran our concession lines and side lines in accordance with instructions in the regular way. An error in chainage was made on O. L. S. Speight's meridian, and the lines between the second and third concession and the fourth and fifth concession were cut for a distance of four (4) miles each, from points fifty (50) links too far south. We ran these lines over again in their correct positions, which we now feel was a mistake. However, as these lines exist in the field we show them on our notes.

## PHYSICAL FEATURES.

The entire area which we covered was gently undulating country, heavily wooded with poplar, balm of gilead, spruce and white birch. There are no outcrops of rock of any moment to our knowledge in the township. We only encountered three small lakes in cutting our lines and did not discover any within the limits of the lots, aside from these.

## SOIL.

Practically the entire area within the township of Orkney is good agricultural land. In the lower areas, strong clay loam is covered by humus to a depth varying from three to twelve inches. Fully half the township, however, is clay loam without any appreciable covering of decayed vegetation and could be farmed at the present moment without drainage.

## TIMBER.

The prevailing tree is certainly the poplar, which grows to a great height on all ridges and dry land. In the muskegs there is a considerable quantity of spruce which is for the most part small in size. Besides these two trees there is a considerable growth of birch, balsam, balm of gilead. There is no brule and our timber plan is uncoloured.

## WATERS.

The Missanabie river runs through the length of the township and is joined by a tributary of considerable size, the Mattawitchewan in concession 5. The flow of the Missanabie river at low water period, we would judge to be about five hundred cubic feet per second. There are, however, no falls within the township and no rapids of sufficient drop to warrant water power development. There are only three small lakes, all of which are shallow with marshy shores.

## FISH AND GAME.

In the Missanabie river we caught, by means of a net, pickerel, pike and suckers. We learned from the Indians that there were also speckled trout to be got in certain places. There are numerous moose and black bear in the woods, also rabbit and partridge in great numbers.

Accompanying this report we submit plans, field notes and account in triplicate.

We have the honour to be, Sir,

Your obedient servants,

(Signed) LANG & ROSS,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 25.*

SURVEY OF THE TOWNSHIP OF SCHOLFIELD IN THE DISTRICT OF ALGOMA.

PEMBROKE, ONT., October 30th, 1913.

SIR,—I have the honour to submit the following report on the survey of the township of Scholfield, in the District of Algoma, in accordance with instructions dated July 3rd, 1913.

I commenced my survey by chaining and parting the south boundary which was run by O.L.S. Speight in 1910, from parts thus established the side lines were run north astronomically, the concession lines were run west astronomically giving the depth shown on the field notes.

The east boundary was run north from Speight's 10 mile post a distance of 9 miles where I planted a post. The north boundary was run this summer by Speight and Van Nostrand after I had completed my survey, and they posted the north boundary of my township for me, and supplied me with the field notes of same, which I have included in my returns.

Wooden posts were planted at the corners of all lots and guide posts on the centre lines of the concessions. Bearing trees were marked for all lot parts, and recorded in field notes. Iron posts were planted alongside wooden lot posts where directed to do so by the instructions. All lines were well cut out and blazed.

I made a careful traverse of the Mattawitchewan river and of all the islands therein, marking a post for each, the notes of which are recorded in the traverse table. I only found one small lake in the township, which I also traversed.

A road allowance was left on each bank of the Mattawitchewan river and around the lake above mentioned.

Frequent observations for azimuth were taken.



## TIMBER.

The township is thickly covered with timber, principally small spruce from 4 in. to 8 in. in diameter, with areas of poplar, balsam, tamarac, cedar and birch, scattered throughout, varying in size from 6 in. to 12 in. in diameter.

## SOIL.

The soil generally is clay covered with moss from a couple of inches to twelve inches in depth. The north-westerly portion of the township is low and swampy, the north-easterly portion having the best land and being fairly level with a good clay soil. Along the Mattawitchewan river the land is rolling with frequent outcrops of rock.

## MINERALS.

No economic minerals of any kind were found.

## LAKES AND STREAMS.

Only one small lake was encountered, this being shallow with a muddy bottom, and no appearance of fish of any kind in it. The Mattawitchewan river is a turbulent stream with many rapids and numerous islands, only three of the latter being over one acre in area. Islands "S" and "T" in concession 1, lying between lots 29 and 31 being the most important. This stream is very shallow in depth during summer months making it difficult to navigate with canoes excepting in high water. During the spring freshet the water rises ten or twelve feet above the low water level, and owing to the small volume of water after the freshet has passed I do not consider that there are any sites suitable for power development.

## FISH AND GAME.

In the early summer there is good trout fishing at the falls and rapids in the Mattawitchewan river. Speckled trout weighing about two pounds being occasionally taken. Pike of fair size were taken during the summer.

Moose were fairly plentiful.

Taken as a whole, I consider that about 75 per cent. of this township will be available for agricultural development, the timber being chiefly valuable for pulpwood.

Accompanying this report are, a timber plan, general township plan and the customary field notes, etc.

I have the honour to be, Sir,

Your obedient servant,

(Signed) HERBERT BEATTY,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

*Appendix No. 26.*

## SURVEY OF THE TOWNSHIP OF TALBOTT IN THE DISTRICT OF ALGOMA.

SUDBURY, ONTARIO, December 5th, 1913.

SIR,—I have the honour to submit the following report on the survey of the township of Talbott, in the District of Algoma, under instructions from the Department of Lands, Forests and Mines, dated July 3rd, 1913.

The township is situated on the line of the Algoma Central and Hudson Bay Railway, about eight (8) miles north of Oba, the junction of the Algoma Central and Hudson Bay Railway with the Canadian Northern Ontario Railway.

The south boundary of the township was run by O.L.S. Speight in 1910. The east, north and west boundaries were run by O.L.S. Sutcliffe and Neelands in 1912.

A road allowance of fifty (50) links was left along the boundaries, and a road allowance one chain in width between lot six (6) and seven (7), twelve (12) and thirteen (13), eighteen (18) and nineteen (19), and twenty-four (24) and twenty-five (25); also between concessions two (2) and three (3), four (4) and five (5), six (6) and seven (7), eight (8) and nine (9), and ten (10) and eleven (11). The lines were run in the centre of the road allowance.

The side road lines were run due north and south and the concession lines as chords of a parallel of latitude.

Posts were planted on the concession line, on the centre line of the road allowance and at off-sets of fifty (50) links north and south therefrom.

Eleven (11) iron posts were planted as required in the instructions at the following points:—

On the south boundary, at the south-west corner of lot twelve (12), and at the south-west corners of lots six (6), eighteen (18) and twenty-eight (28) in the fifth concession, and at the south-east corner of lot one (1) in the same concession, also at the same relative corner in the ninth concession. On the north boundary at the north-west corner of lots six (6) and eighteen (18).

The compass variation was found to be 6 degrees west.

The timber for the most part is spruce, varying from 4 in. to 10 in. in diameter. Along the south boundary and on the ridges there is considerable birch, poplar and balsam. There is no pine of any kind in the township.

The low ground is covered with a thick moss and black muck, the subsoil being clay. From the appearance of the borrow pits along the railway, boulders lie everywhere under the moss. The ridges are of sandy loam with some gravel, but generally good farm lands.

There are several lakes in the township: Irene and Wigwam lakes are deep with stony shores; Katsas lake is rather shallow and has sandy shore. The remaining lakes are shallow and dirty. Some of the smaller ones are simply mud holes. The creeks are shallow and muddy. All the water is quite dark.

Pike and pickerel are the only fish found in the lakes. Some of the smaller streams abound with trout.

There is very little rock in evidence in the township and no mineral at all was found. There are a few outcroppings of diorite in the south-eastern part of the township, and towards the north-west along the railway, some granite is

in view. The contact between the diorite and granite is in concession 8. Samples of rock taken at various places are forwarded with this report.

Accompanying this report are the plans and field notes, also my account in triplicate.

I have the honour to be, Sir,

Your obedient servant,

(Signed) J. RICHARD GILL,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 27.*

SURVEY OF THE TOWNSHIP OF SHETLAND, DISTRICT OF ALGOMA.

LITTLE CURRENT, ONT., December 1st, 1913.

SIR,—I have the honour to submit to you the following report on the survey of the township of Shetland, in the District of Algoma, performed under instructions from your Department, dated Toronto, July 9th, 1913.

I proceeded to the work by Cochrane and the National Transcontinental Railway to the crossing of the Missanabie river, thence by canoes up that river and a large creek in the first concession. This creek empties into the Missanabie in the twelfth concession of Orkney.

I depended on getting Indians at Cochrane for the work as I had arranged, but found on my arrival there that hardly any were to be found. I also learned there that some of those employed on surveys and similar work were receiving 90 dollars per month and expenses. I therefore engaged men from the Lake Huron country which made my expenses for transportation unusually heavy. The fare by the contractor's train from Cochrane to the Missanabie River, 110 miles, is \$5.50 each way.

All lines were run with either a transit or solar compass. Nearly all the meridian work was done with a transit, and all the concession lines, except the south boundary and the last five lots in each concession, were run with the solar.

The lines were well opened up and blazed. Iron posts,  $1\frac{1}{4}$  inches in diameter, supplied to me by your Department, were planted as requested at the south-west angle of lots 6 and 18 in concessions 1, 5 and 9, also at the south-east angle of lot 1 in each of concessions 5 and 9, and at the north-west angle of lots 6 and 18 in concession 12. There were not enough posts supplied to me to plant them at the other two corners indicated on the projected plan sent with the instructions.

Durable wooden posts, mostly spruce and cedar, and of required dimensions, 5 inches square at the ends of concessions and the intermediate ones, 4 inches square, were planted at the front angles of the lots. On them were marked "R" for road, and the numbers of the adjacent lots and concessions. The iron posts were similarly marked.



On the side roads no posts were planted at the rear of the concessions.

The country generally is level or gently undulating with an occasional gradual rise to about 100 feet.

The soil is nearly all a clay bottom overlaid with black muck of varying depths. In the west and north-west there are a few small exposures of granite. A few gravelly knolls and an occasional boulder were also seen in those directions. From careful observation it was estimated that at least 75 per cent. of the land in the township is well adapted to farming. This includes the swamp areas for which there is good drainage into the creeks. In the vicinity of the large creeks in the south half of the township the land is particularly desirable.

The timber is black and white spruce, poplar, balsam, white birch, cedar, balm of gilead, tamarac and a very few jack pines, and range in size from 3 to 15 inches in diameter. Most of the timber is large and merchantable, except the green tamarac which does not exceed 4 inches in diameter. In a number of the swamps good cedar to about 12 inches in diameter was found. In many places groves of very large poplar were seen.

No old brule country with small timber was met with, except in a few places near the west boundary.

The large creek in concession 1 is navigable in places for canoes. It is greatly broken with shallows and boulders. In the high water in the spring a great deal more of it is no doubt navigable. There are no falls on it of any importance.

There are moose but apparently very few caribou or deer. Pike and pickerel were caught in the large creek.

Great care was taken to thoroughly extinguish all our fires before leaving a camp.

I have the honour to be, Sir,

Your obedient servant,

(Signed) T. J. PATTEN,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 28.*

SURVEY OF THE TOWNSHIP OF DRAYTON IN THE DISTRICT OF KENORA.

OTTAWA, January 2nd, 1914.

SIR,—I beg to submit the following report on the survey of the township of Drayton, in the District of Kenora under instructions dated July 14th, 1912.

After the completion of the work in the Mattawa District myself and assistant proceeded to Fort William via Canadian Pacific Railway, and to Sioux Lookout via Grand Trunk Pacific Railway.

On arriving at Sioux Lookout a party was made up not without considerable difficulty owing to men demanding such high wages. Eventually men were secured at reasonable rates.

The party then proceeded to Superior Junction by railway and packed the camp outfit down the Grand Trunk Pacific Railway to where it crosses the southerly boundary of Grand Trunk Pacific Block 10.

The work was carried on in a westerly and southerly direction, all traversing being carried on in conjunction with the blocking out so that both classes of work could be done to advantage.

Owing to stormy weather it was impossible to obtain as many observations as we would have desired without unnecessarily delaying the work.

Both north and south of the National Transcontinental Railway from lot 24 to lot 32 (both inclusive) the country has been burnt and the mining claim lines and posts obliterated, while farther away from the railway it was found very difficult to pick up any trace of some of these, especially to find any posts; however, posts were located on the following claims, viz., A.L. 527, A.L. 528, H.W. 780, S.V. 460, S.V. 461, S.V. 463, H.W. 762, H.W. 717, H.W. 719, H.W. 720 and B.J. 18, these having been plotted from data obtained in the field and the others being plotted from information supplied to us with our instructions, are found to check very closely. No traces of H.W. 715 or H.W. 716 were obtainable as all the area included in these mining claims was cleared, the timber being used for cordwood by the Northern Pyrites Mining Company, the brush being piled up waiting for a favorable opportunity to burn it.

#### ROCK FORMATION.

Generally speaking the township is rough and broken, being composed of diabase rock of the Huronian period. A great many mining claims have been taken up and considerable work has been done on them, the chief one being the Northern Pyrites Mining Company on Big Vermillion lake who employ from eighty to one hundred men continuously in taking out iron ore for commercial purposes. A few mining claims were staked out for gold, but up to the present time there are no producing gold properties in the township. In the reserve south of Grand Trunk Pacific Block 10, between Dobie's seven and eight mile post, a bed of clay suitable for making fire brick and pottery has been discovered, and we understand that a company has been formed to develop this clay proposition.

#### TIMBER.

In that portion of the township east of Minnietakie and Abram's lakes there is no timber of any commercial value and the part from lot 1 to lot 10 consists of brule, stunted spruce and underbrush. That portion of the township from lot 21 to lot 34, generally speaking, is covered with jack pine, spruce, balsam, birch and poplar of small pecuniary value. There are, however, two portions (shown red on timber plan accompanying this report) where marketable timber exists, the first is in concessions one, two and three, lots 21 to 27 inclusive, and consists of jack pine of large size, suitable for ties and piling. The second is in concession four, from lot 28 to lot 34 inclusive, and consists of red pine from 6 to 18 inches in diameter.

#### GAME.

The whole district abounds in game, principally moose, deer, caribou, mink, muskrat, ermine, otter and fox, while in the lakes a great variety of excellent fish is found.

## WATER POWERS.

Abram's chutes in lot 16, concession four, at this point there is a drop of two feet with a large volume of water passing through a narrow gorge having on both sides high banks which lend themselves adaptable to the erection of a dam. Minnietakie lake is approximately one hundred miles in area, thus forming an admirable reservoir for the possible conservation of water. We did not make an examination of the westerly or southerly shores of this lake, consequently have no information as to the area of land that would be flooded by the erection of a dam. We estimate this power at eight hundred (800) horse power.

Pelican chute in lot 27, concession C, there is a fall of twelve (12) feet from the upper level to the lower level here, the shores of the Sturgeon river and island F.P. 99 are well adapted to the construction of dams. We estimate this power at thirty-five hundred (3,500) horse power.

Vermilion river falls in lot 31, concession A, the head here is seventeen (17) feet six (6) inches and has some large lakes behind it which ensures a constant flow of water over the falls. In February and March we estimated this power at six hundred (600) horse power, being at low water.

## SOIL.

From lot 1 to 16 the land is generally rough and rocky with small patches of clay loam suitable for light farming. From lot 21 to 34, concessions 2, 3, and 4, the soil is composed of a sandy loam not very suitable for farming purposes, although in low places there are small patches of clay loam of a very fair quality. From lot 21 to lot 32, concessions I, A, B and C, the land is of a somewhat heavier clay loam and fairly suitable for agricultural purposes.

We beg to draw to your attention the fact that owing to the township being broken into two parts by Abram's lake, possible settlers would have to depend on transportation by boat to get in and out of the market town (Sioux Lookout). In our opinion the most feasible route for opening up the westerly portion of the township would be the construction of a road from Sioux Lookout southerly through the reserve to Pork rapids (lot 20, con. 2) thence westerly through con. 2 or con. 3.

The total cost of the survey of this township is \$9,422.75, of which \$2,550.00 is chargeable to 165 miles of traversing, being an average of \$15.00 per mile. The remaining cost \$6,872.75 being chargeable to land subdivision of which there was approximately 60,000 acres blocked out which is an average of 11½ cents per acre.

Accompanying this report are, a plan of the township on mounted paper, a timber plan on tracing linen, field notes, paylists and accounts.

We have the honour to be, Sir,

Your obedient servants,

(Signed) PATTERSON AND BYRNE,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.



*Appendix No. 29.*

## SURVEY OF THE TOWNSHIP OF MALACHI, DISTRICT OF KENORA.

NEW LISKEARD, ONTARIO. April 25th, 1914.

SIR,—In compliance with instructions from you bearing date of August 13th, 1913, we proceeded with subdivision of Malachi township after completing outlines of Pelican, Malachi and Rice, and herewith beg to tender our report and accompanying plans and field notes of the same.

Through some misunderstanding your instructions were not forwarded from Kenora to Malachi as per our request to the party in Kenora with whom we made arrangements; consequently we were about ready to leave when we received same.

We immediately wired our Liskeard office to send first class chainmen, but it was difficult at that time to get all round men on short notice so we only secured one. Our assistant Mr. Gallagher and our Mr. Neelands each had charge of a gang of axmen working from the same camp, and starting from the south and east checked up in the usual manner by blocking off instead of running more than one day without a check.

We had as rear chainmen a three year S.P.S. man and an Upper Canada graduate now at S.P.S., while as head chainmen we used two of the most intelligent halfbreeds in our employ. As the country was quite rough in places we found considerable difficulty in getting chainage to check very closely, but we kept an accurate angular check on all intersections. The only line that we consider seriously out is the one between the 3rd and 4th concessions which was swung at the intersection of the 3rd side line and 3rd concession line on account of the chainage being 57 links long, and besides, having come over some rough country. However, we found later on that it would have been better to have depended on angles in preference to chainage, as the country was too rough for very accurate work. Our chainmen took time and care as the two gangs could not keep up to the axmen; the falling behind was in a measure due to our having several of the lines checked up. The principal errors found were in using shore chainage instead of triangulation points. The odd chainage in the case of the width of two lots which otherwise would have been the even forty chains was due to these mistakes being discovered when copying the notes.

On account of the north boundary of the township showing longer than the south in the outline work, we decided that the work would come out better to not give the full convergence to the side lines. This accounts for the distances on the north boundary between the side lines and the mile posts, being so nearly the same.

We found after having chained several of the concession lines across lots 1 and 2 that the first mile of the south boundary on the triangulation across Pelican Pouch lake must be in error. This was checked when traversing Pelican Pouch lake and found correct; the error being in the chainage across the front of Lot 2 in the 1st concession, and this accounts for the width of this lot.

We endeavored to keep all lines as straight as possible and if any slight change in bearing had to be made, to make same at an intersection.

All posts are either spruce, jack pine or tamarac or cedar, mounded with stones whenever stone was available—and this was mostly the case. Two bearing

trees were also used for each post and taken in such a manner as to accurately locate the post if lost.

Iron posts supplied by your Department, were planted at points indicated on plan and marked as shown on field notes.

Observations were taken at points shown on plan and as the time of the year made observations on polaris at elongation convenient, all observations shown were taken at this time.

#### AGRICULTURE.

The best land in this township lies south of Malachi, Duck and Marshy lakes. Of this, about two-thirds is sand or rock; the remaining third is thin spruce swamp with good land between it and the higher ground. Between Malachi and Burwash lakes there is a small area of good land which extends around Burwash lake to Jack lake. There are also small areas to the north-west and north-east of Muddy lake, south of Charles lake, east and west of Marshy lake, and east and north-east of Simpson lake. Between Malachi and Duck lakes there are also patches of good land. The sandy land in this locality is for the most part well timbered and with the ideal climate which it enjoys, should be fairly productive if properly worked.

That portion of the township surrounded by Duck, White, Pelican, and Marshy lakes is practically all bare rock or sand, on which blueberries grow in large quantities, but which is worthless from an agricultural standpoint.

West of Malachi lake, particularly in concessions 4, 5 and 6, there are small patches of fairly good land, and east of Pelican Pouch lake in the same concessions; but practically all the remainder of the township north of Duck lake, with the exception of island "F" and a point of land south-east of island "F" and around the south-west shores of Otter lake and the west shore of White lake, is very poor from an agricultural standpoint.

We estimate that there is possibly one-third of the land area of the township that is fit for agricultural purposes. Of this, one-half is a light sandy soil.

#### TIMBER.

Spruce, tamarac, poplar, birch, balsam, and jack pine covers most of the good land, while that portion that is of little agricultural value is covered with second growth poplar, birch or jack pine.

A section of country between Muddy and Precipice lake is timbered with jack pine, much of which is large enough for ties, and in a few years will be a valuable asset.

#### MINERALS.

No trace of any economic minerals was found—the entire country rock being of Laurentian granite; that part to the south being of a reddish color and containing glassy blue quartz veins, while farther north along the railroad it was of a greyish color, breaking readily along almost horizontal lines and presenting a rather striking banded appearance.

## FRUIT.

Blueberries, wild plums and raspberries seem to thrive, although the latter two were not very widely distributed. The climate, however, seems adapted for growing berries of all kinds.

## GAME.

We used the net furnished by your Department, with varied success, and found large pike and pickerel in Malachi lake; small pike in the other lakes; and suckers in Pelican Pouch. The natives informed us that white fish are plentiful in Malachi lake, but we saw no trace of them:

Red deer, caribou and moose seemed plentiful, and their trails lead from lake to lake over the entire township.

Ducks are very plentiful on Muddy and Marshy lakes, while prairie chickens were seen in considerable numbers on the bare rock and sand north-east of Duck lake. In the lighter timber through the northern portion of the township, partridge also are plentiful.

Coyotes were heard frequently, while mink, martin, porcupine and muskrats were seen occasionally. Rabbits did not seem as plentiful as in other parts of Northern Ontario, but on the whole we consider the township abounds in game.

## SUMMER RESORT LOCATIONS.

On Malachi lake there are many places along the shore suitable for summer resorts; the sand beaches being very desirable, but much of the shore which is paved with small boulders slopes gently under the water.

The islands are mostly rocky; island "F" being the only fertile one. The large island "A" in the southern portion of Malachi lake is well timbered, but very rough. All the islands, however, could be used for resorts.

## PHYSICAL FEATURES.

The country for the most part is rolling; all marshy lakes have a considerable area of flat or gently rising land around them—Marshy and Muddy lakes being typical of this class.

White lake, Charles, Jack and Dutch lakes have for the most part gently sloping shores with clear water, of considerable depth.

Otter, Black, Precipice, and the southern portion of Malachi lakes have deep, dark waters, but very clear when removed from its dark shores.

The waters of Pelican Pouch lake during August and September were covered with a thick green scum, giving it the appearance of a saturated solution of paris green. Under this scum the water was transparent and good for drinking purposes.

The creek which drains Malachi lake is navigable for canoes to Otter lake,

The narrows draining Pelican Pouch lake into Otter are interrupted by a waterfall of 10 feet and 3 inches in height, very easily developed, but capable of developing only 100 h.p. If all the natural discharge was held on Pelican Pouch lake and if water was raised another five feet by dam the horsepower could be increased by 50. These falls being situated just where the waters of Pelican Pouch lake discharge into Otter lake, is quite convenient to the railroad which



passes along the north shore of it. The construction of a saw-mill at this point could be economically accomplished, and with dead water over Pelican, Catherine and Marshy lakes, timber for lumber, ties, etc., could be quite easily driven or towed to the mill site.

The general character of the country is such that we would advise a careful inspection of same before too much is subdivided, as much time, money, and annoyance could be saved by subdividing only those portions fit for agriculture.

Trusting that the above report may supply the desired information and hoping that same meets with your approval.

We have the honour to be, Sir,

Your obedient servants,

(Signed) SUTCLIFFE AND NEELANDS,

Ontario Land Surveyors.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 30.*

SURVEY OF THE TOWNSHIP OF MATTAWAN IN THE DISTRICT OF NIPISSING.

OTTAWA, September 16th, 1912.

SIR,—I beg to submit the following report on the survey of part of the township of Mattawan, in the District of Nipissing, under instructions dated July 12th, 1912.

The party was outfitted at Ottawa and on the first day of August, 1912, left for Mattawa.

After questioning all the settlers in the district to be surveyed, it was found that the nearest post to the work that was known to any of them was that between lots 33 and 34, on the north side of the road allowance between concessions 7 and 8.

There the survey was commenced and by running a line on the approximate bearing, always looking for evidence of the true line and when such evidence was found these points were joined up by straight lines. In this manner the following intersections were obtained, viz.:

- lots 10 and 11, concessions 7 and 8.
- lots 15 and 16, concessions 7 and 8.
- lots 20 and 21, concessions 7 and 8.
- lots 10 and 11, concessions 9 and 10.
- lots 15 and 16, concessions 9 and 10, and
- lots 20 and 21, concessions 9 and 10.

Posts were planted at these intersections, the chainage between them carefully ascertained, and other posts were planted to mark the lot corners by proportioning the chainage according to that given in the original field notes.

Owing to the fact that lumbermen have been operating in this country for a great many years and also owing to the fires which have over-run this territory, evidence of the original lines has, in places, been completely obliterated.

A traverse was made along the concession lines across lots 11 to 20 and also on the road allowances between lots 15 and 16, and between lots 20 and 21. No traverse was made of the road allowance between 10 and 11, as the true line was not cut out all the way.

I enclose plans in duplicate, field notes and also accounts in triplicate.

I have the honour to be, Sir,

Your obedient servant,

(Signed) FRANK E. PATTERSON,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 31.*

SURVEY OF THE TOWNSHIP OF STIRLING IN THE DISTRICT OF THUNDER BAY.

RENFREW, Ont., October 30th, 1913.

SIR,—I have the honour to submit the following report on the survey of the township of Stirling in the District of Thunder Bay, performed under instructions dated the 14th day of July, 1913.

In pursuance of instructions, I commenced my survey at a point on the west boundary of the township of Lyon, four miles south from the north-west angle of that township, this point being eighty-five links north of the post planted by Ontario Land Surveyor Bolton, to mark the line between lots 8 and 9 in the eleventh concession of that township.

From this point I ran the side line between lots 4 and 5 west astronomically and along it laid off concessions giving each concession a depth of eighty chains. I then laid out the township in the usual way, giving each lot a width of forty chains and each concession a depth of eighty chains. No road allowances were left in the survey of this township.

On the concession lines I planted substantial posts (wooden) to mark the angles of all the lots. All posts were planted accurately on the survey lines and two bearing trees were taken for each post planted, and where stones were obtainable, I placed a mound of stones around the posts.

As this township was laid out in single front concessions, therefore, the posts planted between lots where no side lines were run, that is between lots 1 and 2, 3 and 4, 5 and 6, etc., on the front of the second concession for example, having no connection with the side lines in the first concession, were, therefore, marked with the concession number on the west side only and the lot numbers on the north

and south sides and the same in all the other concessions. The posts planted between lots 2 and 3, 4 and 5, etc., where the side lines were run, refer to both concessions and were, therefore, marked with the concession number on both the east and west sides, and with the lot numbers on the other sides. On the west boundary I planted posts only at the intersections of the side lines with that boundary. I brushed out and chained the east boundary of the township, and in my chainage have shown the positions of all posts planted on this line in the former survey.

Where the front angle or angles of a lot fell in a lake or river, I projected and planted the post in the proper place and have shown in my field notes the position of such posts. Where the intersection of a concession and side line came in a lake or river, I planted a post above high water mark at each of the four points in which these lines intersected the shore of such lake or river.

In performing the survey the lines were well cut out and blazed. Astronomical observations were taken at least once a week on Polaris at elongation to verify the direction of my lines.

The field notes were kept according to instructions, giving first the east boundary, then the line between the first and second concession, next the line between the second and third concession and so on, then the side line between lots numbered 2 and 3, throughout the various concessions, then the side line between lots 4 and 5 throughout the various concessions and so on.

According to instructions I tied in my survey with the Canadian Northern and the Canadian Pacific Railways, and have plotted them correctly on my plan and have computed the areas of the several lots or parts of the lots through which they pass.

With a view of making the survey permanent in case of fire, I planted, alongside the wooden posts, iron posts, at the points indicated in red on the projected plan accompanying my instructions. These posts were marked with a cold chisel with the numbers of the lots and concessions, similarly to the wooden posts alongside which they are placed. The positions of these posts are shown in my field notes.

All waters within the limits of the township were surveyed and connected with my lines of survey, whether such waters were intersected by the concession or side lines run by me, or not. These surveys have been plotted on a scale of ten chains to the inch. The survey of Wolf river and the lakes in the township were carried out by means of the stadia, except in the case of lakes intersected by the survey lines, where the distances were obtained by triangulation in the usual way.

Accompanying this report is a plan on a scale of forty chains to the inch, showing the natural features of the country, also field notes of the township and a timber plan of the same.

Under date of August 23rd, 1913, I wrote Mr. Kirkpatrick to the effect that I was unable to locate the north boundary of the township of Dorion, this line forming the south boundary of the township of Stirling. The old blazes and marks had been obliterated by fire. I re-ran the whole of this line. Mr. Kirkpatrick replied under date October 17th, 1913, that I will, therefore, be allowed to charge the amount per mile as in the other parts of the township according to instructions. On my plan I have shown locations A.L.663, A.L.561, A.L.633 and E.D.405A according to instructions. I beg to report on the natural features of the country under the following heads:



## TIMBER.

The greater part of the township is thickly timbered with spruce, balsam, poplar, birch, and cedar, varying in size from two to eight inches in diameter. In the north-easterly part of the township a considerable quantity of large cedar was encountered, running from ten to thirty inches in diameter. In the northerly half of the township, through concessions four and five there is a great quantity of spruce, four to ten inches in diameter.

## SOIL.

Good agricultural land was met with in the south-easterly part of the township, this being in the locations mentioned above. This same soil prevails through concessions 1 to 5, from lots 1 to 6. The south-westerly part of the township traversed by Wolf river, is of no value as agricultural land except in a few isolated spots. It is for the most part very rocky with steep rocky hills. In the north-easterly part of the township there is some land of agricultural value, some clay soil being met with in this section. The central part of the township is of no value for agricultural purposes, it is very rocky. About the lake, shown in concessions 4 and 5, lots 8 and 9, there are precipices with from 150 to 200 ft. sheer drop. As shown in the notes, there are other such places to be met with in the westerly part of the township. The north-central part of the township is exceptionally good for agricultural purposes, the soil being for the most part of the same sandy formation as met with in the south-easterly part. The settlers in this south-easterly part of the township have met with considerable success in the cultivation of this land and it is to be pre-supposed that the soil in the parts mentioned above will yield to the same treatment. In general I would report that in my estimation about fifty per cent. of this township is available for agricultural purposes, including the locations above mentioned.

## MINERALS.

No traces of minerals of economic value were met with in the survey of this township. The south-westerly part of the township has been thoroughly prospected and some claims staked out, but nothing to warrant favorable mention was met with by me, either in the part mentioned or in the other parts of the township.

## LAKES.

As shown on the plan and field notes, eleven lakes were met with in the course of the survey of this township. These were all traversed. They are, for the most part, deep and clear, well stocked with fish.

## WOLF RIVER.

This river traverses the south-westerly part of the township, flowing in a general south-easterly direction and emptying into Lake Superior. It varies in width from half a chain to two and a half chains. It is, for the most part, very shallow. The current is quite swift, readings taken showing an average rate of flow of about three miles per hour. This river was traversed from where it enters the township on the west boundary to where it leaves on the south boundary. Four rapids were met with these giving a total fall of twenty-seven feet. Four

falls were also encountered, these giving drops of 3 ft., 18 ft., 21 ft., and 30 ft. respectively. This stream is available for power development, the most promising place being at the thirty ft. fall mentioned above, this being in lot 1, concession 5. There is a wagon road leading from this falls to the town of Dorion on the Canadian Pacific Railway. I have shown on my plan and traverse plan reservations for power development in concession 5, lots 1 and 3, and in concession 6, lot 3, these adjoining the most favorable power sites on the river.

#### GAME.

Signs of deer were quite plentiful throughout the township, as were also signs of moose, notably in the northerly part of the township. Rabbit and partridge seemed very scarce. There were many signs of beaver met with in the northerly part. The lakes, as mentioned above, were well stocked with fish, trout being very plentiful as well as pike. Wolf river, in particular proved to be a good trout stream.

Accompanying this report are field notes, index plan, general plan, chain-bearers' oaths and accounts in triplicate.

I have the honour to be, Sir,

Your obedient servant,

(Signed) J. R. ALLAN,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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#### *Appendix No. 32.*

#### SURVEY OF PART OF THE TOWNSHIP OF GORHAM, DISTRICT OF THUNDER BAY.

PORT ARTHUR, March 17th, 1914.

SIR,—I have the honour to submit herewith the following report on the operations of the survey party under my charge, engaged in laying out additional lots to the north of Gorham township, viz., concession 7 and the western portion of concession 8 for agricultural purposes as per your instructions dated 14th April, 1913.

As instructed the north boundary of the township was re-run and chained, and posts planted at 40 chains west of the old meridians and marked for the north concession only. The retracing of the old lines was a very difficult and tedious undertaking, the original survey having been made 21 years before. Where the chainage showed an unusual discrepancy from the old notes these distances were checked by another set of chainmen. The production of the old blazed meridians northward likewise did not turn out quite satisfactory. In future work of a similar nature I would suggest running the meridians south from the new standard con-

cession and having the inevitable small jogs on the old concession line. The survey was commenced as advised, by running a line due north from about the centre of the township—the north-east corner of lot 9, concession 6, on the old survey—80 chains, and thence east and west astronomically across the township, along concession 8. An iron pipe was planted here as well as at each end of this concession. Small iron rods or pipes were also planted where the wagon road crosses the 6th concession, and the east boundary of lot 3, concession 7, as shown in field notes.

The land on the extreme eastern limit is very rough and rocky, but improves as we go west and doubtless much of it will be eventually taken up by those hardy and industrious pioneers of settlement of Finnish origin, who are making a success of their holdings in other parts of Gorham and Ware townships. A clearing has been started on the north half of lot 2, concession 7, adjoining the wagon road by a Mr. Dufault, who stated his desire to obtain and cultivate the same. The soil is sandy throughout with vegetation more abundant in the valleys of the numerous streams and lakelets. Some streams have been dammed by beaver, forming lakelets of flooded land which will likely revert eventually to the former river dimensions. As will be noticed on the plan the raising of the level of Hazelwood lake for Hydro-Electric purposes at Port Arthur has greatly enlarged the area, around the shores of which in concession 7 a road allowance has been provided for. Onion lake which has likewise been greatly enlarged for storage for Hydro-Electric purposes at Port Arthur, lies about  $\frac{1}{4}$  mile north of lot 1, concession 8. Surprise lake on lots 14 and 15, concession 7, and 14, concession 8, in a prominent lake, 2 miles in length, abounds in pike and lies on the winter highway to the north-east arm of Dog lake. The waters of all these lakes are at times rather warm and of a slightly brownish tinge.

There is also Trout lake, one mile in length, on the western end of concession 7 and partly in the township of Ware, which, owing to its favorable sandy sloping beaches is being sought after as a summer resort. The trout here seldom attain any appreciable size owing to the close attention of sportsmen and others. A road less than two miles in length of easy grade would connect this beauty spot with the excellent Government road to the south admitting of rapid motor connection with the cities of Port Arthur and Fort William.

Another lake is Pike lake,  $\frac{3}{4}$  of a mile in length on the north of lots 9 and 10, concession 7. A deserted shaft and forge indicated that this had been worked as a mining claim (gold?). It was surveyed long ago as 233 T.

I might here remark that our survey was entirely in the Huronian formation, the only other rock noticed being an outcropping of intrusive granite near the west end as shown in the notes. There were no visible indications of economic minerals and no unusual variation of the magnetic needle.

The timber plan submitted herewith shows the very mixed character of the forests. It would be difficult to note any particular area where any considerable quantity of merchantable timber prevails apart from the other varieties, which mentioned in order of precedence I would rank as follows, spruce, poplar, birch, jack pine, tamarac and balsam. The prevalence of windfalls indicate that fires have swept the greater portion of their area within the last 40 years.

The game in this region consists of the usual moose, deer, partridge, rabbit, duck, bear, porcupine and beaver, the latter of which are being recklessly slaughtered and will soon disappear unless there is a more stringent enforcement of the game laws. The sowing of wild rice as an encouragement for the ducks and restocking the lakes and streams with trout, which, in the past have been abundant, should prove a benefit.



Owing to the almost unprecedented rainfall of last spring and summer as well as the more attractive work on the colonization roads in the vicinity, it was almost impossible to induce the settlers to work on our survey party even at \$2.50 a day and board. Appearances are that labor will be much cheaper the coming season.

As I had previously traversed the Current river for the City of Port Arthur, I was enabled to save the expense of a survey of that difficult portion.

The survey work in this township was approximately as follows:

Miles of lot line run .....	32½
Miles traverse of lakes, etc., chained .....	8
Miles pacing and topography .....	5
	<hr/>
	45½

also cutting several miles of portages.

I have the honour to be, Sir,

Your obedient servant,

(Signed) A. L. RUSSELL,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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### *Appendix No. 33.*

#### SURVEY OF PART OF THE TOWNSHIP OF WARE, DISTRICT OF THUNDER BAY.

PORT ARTHUR, March 17th, 1914.

SIR,—I have the honour to submit the following report on the survey of concession 7 and part of concession 8, north of Ware township during the past year.

The conditions here are very similar to those prevailing north of Gorham township, the country, however, is not so broken up by lakes.

The soil in the eastern portion is sandy but changes to a clay in lot 7, which continues westward to the Kaministikwia river where rock is more in evidence than elsewhere. The better land lies in the eastern half adjacent to Gorham township and some good land will be found north of concession 7 along the river. Very little swamp was encountered.

Many of the lots will doubtless be located by those hardy and thrifty pioneers of Finnish origin who are settling upon the lands to the immediate south.

As shown on separate timber map the usual mixed spruce, birch, jack pine, poplar, tamarac and balsam abound. A considerable area of large timber exists in the western portion of concession 7 and several winter roads have been cut connecting therewith. Some of the good timber has already been taken out.

There were no visible indications of minerals of economic value and, except where there is intrusive trap rock at the Crooked rapids. As usual variation of the magnetic needle was noticed.

## WATER POWERS.

A fall of fifteen feet in a few chains in the Kaministikwia river at this point may eventually be developed for water power purposes owing to the beneficial results of the controlling dams now in operation at Dog lake. The right-of-way for the transmission line from the Great Dog falls to Port Arthur should also be reserved in patents, as the survey operations of last year at this point indicate an early development of this valuable power for the benefit of the twin cities at the head of the lakes.

As Trout lake, as previously reported, in attracting attention as a probable summer resort and lies partly in this township, I might refer again to the advisability of reserving the adjacent lands for that purpose. As mentioned easy access can be had thereto for campers and settlers by connecting with the Government Road two miles to the south.

The western end of the township can be reached by the wagon road leading from the Canadian Pacific and Grand Trunk Pacific Railways at Kaministikwia, also by boat in the river.

The new order, re taking agricultural or mineral (timber?) locations, conditionally, might with advantage be applied to this township.

I have the honour to be, Sir,

Your obedient servant,

(Signed) A. L. RUSSELL,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 34.*

SURVEY OF THE TOWNSHIP OF O'BRIEN, DISTRICT OF TIMISKAMING.

NEW LISKEARD, April 11th, 1914.

SIR,—In accordance with your instructions bearing date July 4th, 1913, to survey the township of O'Brien, I herewith present my report.

The soil in this township is apparently of good quality; in clearings made along the right-of-way, during the construction of the Transcontinental Railway, an excellent growth of timothy was seen, and the fire rangers at Kapuskasing river had fine vegetables. I believe that there is no part of the township, that will not be fitted for agriculture, though part of it will require drainage, particularly away from lakes and rivers. One thing observed was the high spring flood marks on the trees along the Kapuskasing and Woman rivers, one result being that in places where the land runs back level or with a gradual slope from the banks, it is submerged during the spring freshet. With the clearing up of the country these floods will be more severe.

With regard to timber, that along the rivers and watercourses is of fair size, some of it running up to 18 and 20 inches in diameter, most of it spruce with considerable balsam of gilead and a sprinkling of birch and poplar, where the land is fairly dry. Away from the rivers, the timber is mostly small and will be useful only for pulpwood, the swampy condition of the land has no doubt something to do with this, and it cannot I think be laid to any defect of the soil.

This township will hardly likely be noted for its mineral production, there are no rock exposures except on points along the Kapuskasing river and at the falls on Woman river, and no traces of minerals of economic importance could be discovered in these exposures.

Upon the fishing, I am unfortunately not able to speak with authority, except in so far as the Kapuskasing river is concerned. We placed our net in this river but after several days succeeded in catching nothing but a few suckers. The rivers and streams of this township are of a muddy color and it is quite unlikely that fish will be found in them to any extent. I am told by the Indians that there are plenty of pike and pickerel in the lakes of this township of which there are several, the chief being Lily lake. This I was not able to confirm for on removing the net from Kapuskasing river it was found to be in such a condition from weeds and driftwood that it was impracticable to use it again. The lakes I have referred to are very pretty but are inaccessible, except on foot.

Moose are plentiful here as they are in all this section of Timiskaming. Several bears were seen and one of my men saw a red deer. Of other game and fur-bearing animals no traces were seen, but I understand from the Indians and trappers that I saw, that this is a good township for fur.

The National Transcontinental Railway passes through this township, entering it about midway on the east boundary and continuing in a north westerly direction. It crosses the westerly boundary of the township about one and three-fourths miles from its north-west angle. There are two railway stations within its borders, one at the Kapuskasing river and the other about a mile from the east limit of the township.

Observations were taken at regular intervals as are shown on the observation sheet accompanying this report.

Sixteen iron posts supplied by the Department were planted as follows:

(1) On the south boundary of the township at intersection between lots 6 and 7.

(2) At south-west angle of lot 18, concession 1.

(3) On the east boundary at intersection between concessions 2 and 3.

(4) At south-west angle of lot 6, concession 3.

(5) At south-west angle of lot 18, concession 3.

(6) At south-west angle of lot 28, concession 3.

(7) On east boundary at intersection between concessions 3 and 4.

(8) At intersection lots 6 and 7, concessions 3 and 4.

(9) Intersection lots 18 and 19, concessions 3 and 4.

(10) At south-west angle of lot 24, concession 7.

(11) At south-west angle lot 6, concession 9.

(12) At south-west angle lot 6, concession 11.

(13) At south-west angle lot 18, concession 11.

(14) At south-west angle lot 28, concession 11.

(15) At north-west angle of lot 6, concession 12.

(16) At north-west angle of lot 18, concession 12.



There was one post supplied in addition to those just enumerated, but it was unfortunately lost and I was unable to replace it.

The total area of the township is 51,970 acres, made up as follows:

Land in lots .....	49,413 acres.
Land in roads .....	1,040 acres.
Railway lands .....	164 acres.
Water (including islands) .....	1,353 acres.

All of which is respectfully submitted.

I have the honour to be, Sir,

Your obedient servant,

(Signed) C. H. FULLERTON,

Ontario Land Surveyor.

The Honourable the Minister of Lands, Forests and Mines,  
Toronto, Ont.

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*Appendix No. 35.*

SUPPLEMENTARY LIST OF LICENSED CULLERS, 1914.

(For complete list of cullers see Minister's Reports, 1911, 1912, 1913.)

<i>Name of Culler.</i>	<i>Post Office.</i>
Gordon, J. B.	Cache Bay.
Mathewson, O. R.	Blind River.
McCool, Daniel.	Sudbury.
Palmer, Fred.	Blind River.
Skead, Eric S.	Spanish Mills.
Sullivan, Michael.	Barry's Bay.
Swale, Wm.	Gillies Depot.

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*Appendix No. 36.*

ALGONQUIN PROVINCIAL PARK.

*Honourable W. H. Hearst, Minister of Lands, Forests and Mines:*

I beg to hand you my report on Algonquin Provincial Park for the fiscal year ending 31st October, 1914.

Up to the time the deplorable war broke out Algonquin Park was the pleasure resort of a great number of people coming from all parts of the world, including Russia, China and Japan. Mr. Vladimir J. Generosoff, senior specialist of the hunting industry of the Department of Agriculture, St. Petersburg, Russia, was

sent here by the Russian government to study our methods of game protection and the management of game and forest preserves. As soon as war was declared most of the visitors were called home, and even here in the heart of our Canadian woods its blasting effect was felt. Orders for live animals, of which we have had a number, were all cancelled, and owing to the general depression and the fall in the price of furs it was decided not to take any pelts this winter. This, of course, very materially lessens the income from the Park, yet notwithstanding these facts we collected for fishing licenses, \$1,249.00; Live Animals, \$1,112.50; Rents, \$270.00; Furs, \$300.00; Cedar Timber, \$679.90; Fines, \$20.00; making a total of \$3,629.40. The cedar sold was to the Grand Trunk Railway for the construction of their summer camps on Big Island lake, which were completed in time for the summer's trade. This camp can comfortably take care of a hundred guests and while the cottages are most homelike they have every convenience, the sanitary arrangements are the best, and the entire camp is lighted with gas.

We seem to have fewer anglers and more who come for the sake of the life in the woods and the health to both body and mind to be derived from such a life. I feel that the Park is doing a good work as an educator of our people who are learning to enjoy a visit with the wood folk in their natural haunts more than the destruction of them. Fur-bearing animals have become very abundant, especially beaver and otter. Deer are plentiful and can be seen by all visitors with little trouble; in fact so tame have they become that they feed on the terraces in front of the hotel, and some good photographs have been taken of them there.

It is now recognized that owing to the increased demand and the steady encroachments which civilization is making on the waste places of the world inhabited by fur-bearing animals, a large part of the fur supply of the future must necessarily be got from animals bred in captivity or under control. Fur-farming is rapidly coming into favor, and the astonishing development of the black fox industry in Prince Edward Island has shown it to be capable of yielding large profits. The Department has thought proper to give Ontario fur-farmers an opportunity of obtaining such fur-bearing animals as are found in Algonquin Park in order to stock their ranches. These include beaver, mink, marten, fisher, otter, etc., but principally the first three. Special appliances have been devised for capturing the animals without injury or mutilation. The live animals sell for considerably higher prices than do the furs, since their capture and care involves not a little trouble and expense. Nevertheless, a fair revenue can be derived to offset the cost of administering the Park, and at the same time run no risk whatever of depleting the supply of fur animals.

A large cement building has been erected at headquarters to take care of live animals. It is 22 x 42 feet, all of cement with iron roof and iron partitions, and is supplied with running water and lit with gas, the work being done by our own men. The object of this is to keep the animals after capture till they become accustomed to being handled and fed before shipment, and to afford the hundreds of visitors to the Park an opportunity of studying the different animals. During the winter we hope to fill the pens with mink and marten, mostly the latter, and we hope next summer to have raised a number of young for shipment. The old animals will also be shipped to make room for others.

Complying with your instructions the wharf petitioned for by the campers was built and proved a great convenience. It is a floating wharf, built of sided cedar, and covered with two-inch plank.

There are sixteen summer cottages on Cache lake and two schools. The cottagers pay a land rental of from \$7.50 to \$15.00 according to the size of lot held. The schools pay a rental of \$75.00 for five acres. The boys' school is presided over by Prof. G. G. Brower of New Jersey, the girls' school of some fifty odd girls is under the care of Miss F. L. Case of Rochester, N.Y., and is, I believe, the model camp of America. On Lake of Two Rivers there is another camp, the Bordentown (N.J.) Military Institute, under the management of Prof. W. L. Wise. These camps are a splendid thing for the young people. I regret none of our Ontario people have taken this work up, financially and from an educational point of view it offers great inducements. We expect to have another such camp at Source Lake next year. Fishing during the past year has been good. Some fine specimens were taken: one fine salmon trout caught in Smoke lake by Lady Conan Doyle has been mounted and sent to her home in England. Nearly all the prizes offered by sporting journals won this year were taken by fish from Algonquin Park. A number of fingerling bass were put into Cache lake; they were in splendid condition when planted. I should like to see some more next year, also salmon and speckled trout, as it is important to keep the lakes near the hotels stocked, so that those who are not able to go far afield can have some sport.

I regret to have to report several bad fires, which although they did not destroy a great deal of valuable timber, ran over a large territory, a great deal of which had been burnt over some sixteen years ago. Of course the young growth was destroyed. Every possible effort was put forth to check these fires, but the continual dry weather and high winds constantly from the same quarter, made it almost a hopeless task. In nearly every case these fires were caused by the engines of the Grand Trunk Railway. It would almost seem necessary to make it compulsory to burn oil in the engines running through the Park. One year's loss would convert the engines into oil burners.

As instructed by you a gang of fifteen men and a team were last August put to work to clean up the debris on the right-of-way and for some distance into the woods on each side, the Grand Trunk people paying half the expense. A splendid job was made of it and the work continued until late fall, when the snow stopped it. I would strongly recommend the continuance of this work next spring and until the entire length of the railway within the Park limits is cleaned up. It will very materially lessen the danger from fire. I would also recommend building a telephone line along the railway through the Park a distance of some forty miles. This would cost in material between \$500 and \$600. The expense of putting it up would be very small as the work could be done by the Rangers. We now have telephones at headquarters and Joe Lake, and also have connection with Smoke lake eight miles to the south and Island lake ten miles to the north, using the wires of the Grand Trunk. These phones were of great assistance during the fires. With a phone in each shelter house between Rainy lake and Whitney our men could get in touch with headquarters quickly and report help wanted, etc. I think the Grand Trunk Company would not object to our using the poles along the railway for this purpose.

We had two bad fires on the limits acquired by the Government from the Munn Lumber Company. A great part of the section burnt over was old burn and slash, but some small pine was also injured. This was put up for sale, but owing to the great depression in the lumber business no offers were received. The hardwoods were not badly burnt, and I think in most cases will revive, it being



a leaf burn, that is to say, it burnt so rapidly with the high winds that it did not burn deeply. We had five shelter-houses burnt, three of these were old ones, and needed replacing, but two were good buildings.

The time of our men during the summer was taken up fighting fire and we had to hire a great deal of extra help to build two new shelters, a frame building at Mud lake to replace one burnt, and another a sided log building on Moose lake. These are both substantial edifices. Several portages were cut out. During the trapping season our men are kept patrolling the sections allotted to them and I feel that they have done good work. I am glad to report very few breaches of the law, and what there were did not constitute serious offences. A number of guns were confiscated and sent to Toronto, mostly taken from foreigners on the construction work of the Canadian Northern Railway.

There is not much lumbering going on in the Park this year. Mr. J. R. Booth has a small camp in the new section cleaning out a little that was left from last year, and McLaughlin Bros. of Arnprior are taking out some on the burnt section. Lumbering is, as a rule, very quiet all over the Province.

The Canadian Northern Railway which runs through the northeastern portion of the Park is well on to completion, and work trains have been running over it for some time from North Bay. This railway follows most of our large lakes in the north section and the Petewawa river and Grand lake in the new section. It will be a very popular road with the angler as the lakes and rivers in that whole section are full of the finest speckled and salmon trout.

Eight townships were added to the Park this year, namely: Edgar, Barron, Guthrie, Master, Stratton and Bronson, half of Fitzgerald, White, Niven and Clancey. I have visited these during the past year; they are mostly covered with a young growth of red, white and grey or Labrador pine, (*pinus divaricata*.)

A supply of permanent metal signs for indicating the boundaries of the Park was received from the Department. These will be nailed to trees on the boundary lines, especially at points where they are crossed by trails, creeks or rivers; also on all boundary lakes, thus giving notice to all travellers or other persons interested when they enter the limits of the Park.

Deer are numerous all over the new section and beaver, mink, marten, etc., are still in evidence, notwithstanding this section has for years been heavily trapped. We secured a building at Basin Depot from Mr. M. J. O'Brien, the limit-holder, and fitted it up for a shelter-house. The four settlers who had squatted in the township of Guthrie have been satisfactorily settled with, and are leaving their places. I would recommend giving the ranger at Basin Depot a saddle horse, as the country is so open and traversed by so many roads he could quickly do the work of two or three men with a horse, and could come out quickly in case of help being required in case of fire. The total cost would not be more than \$70, and as there will be abundance of hay there, there would be no cost attached for feed; there will, of course, be stables and all the buildings we require when the settlers move out. One has already gone.

The Pembroke Lumber Company's limits have also been acquired by the Government and constitute another large tract upon which there is a lot of young pine growing for the people of Ontario.

Our staff has been composed of Superintendent and twenty-six men. I feel that our men have done good work, although it has without doubt been the worst year for fires since the establishment of the Park, and had not a great effort been put forth on the part of our rangers, a great deal more territory would have been destroyed.

Wolves are still a menace to our deer, our men succeeded in killing a large number of these pests and we propose during the coming winter to make a special effort to materially reduce their forces.

I have the honour to be, Sir,

Your obedient servant,

G. W. BARTLETT,

*Superintendent.*

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*Appendix No. 37.*

QUETICO PROVINCIAL PARK.

QUETICO PARK HEADQUARTERS, KAWENE P.O., October 31st, 1914.

*To the Honourable the Minister of Lands, Forests and Mines, Toronto, Ontario:—*

SIR:—I beg to hand you my report for the fiscal year ending Oct. 31st, 1914, on the Quetico Provincial Park, of which I have the honour to be Superintendent.

I took charge of the Park in November, 1913, when it was transferred from the Department of Game and Fisheries to the Department of Lands, Forests and Mines.

At the time of transfer I found buildings as follows: A small house at north-west end of Eva lake, one and one-half miles from Kawene station on the Canadian Northern Railway, occupied at the time by Col. D. D. Young, warden in charge of the Reserve. This building was some six miles from the headquarters at French lake. The headquarters are situated at the east shore of French lake at the west end of what is known as French Portage on the old Dawson route from Port Arthur to Winnipeg.

The buildings at headquarters were a large log hut, 21 x 47 feet, a portion of which was partitioned off for a kitchen, the balance being used as a sleeping and living room for the men employed on the Reserve. A small cabin of two sections 12 x 14 each, was used as a warden's house; there were also a good storehouse and stable combined, 16 x 24, also several small temporary outbuildings.

I occupied the small cabins during last winter and portion of past summer until I could erect a proper house for myself. During the past season I built a house 26 x 36 of sided pine logs, with good roof of tin shingles, good basement, full size of the house, with sided cedar wall, all of the basement is below the surface of the ground. I placed in the basement a good furnace enclosed in a stone room 12 x 12 feet for protection from fire.

I also changed the men's apartments by building a kitchen at one side 17 x 21 feet, and converting the old kitchen into a comfortable dining room. I also put in a floor in all of the large buildings, and purchased iron cots and mattresses for the men. This year I had the whole of the buildings plastered with mortar.

I erected a small stable 16 x 20, a small frame blacksmith shop, and two small out-buildings. The building used as stable and storehouse I had cleaned out from top to bottom, put in a new sided top floor and transformed it into a tool and provision storehouse. I intend during the winter season to erect an ice house, which is very necessary. During the summer season we have to depend on getting our drinking water out of French lake, which contains good clear water.

I also built a good shelter hut on Eden island in Quetico lake, one at Johnston's Point on Basswood lake, one at Darby's Island at the east end of Basswood lake, and one at the foot of Pickerel lake. The old shacks at Eden island and Basswood lake were unfit for habitation. All new huts built are 16 x 20 feet of hewn and peeled logs, with pitch roof covered with paroid roofing, well floored, and contain bed, stove, table and benches or stools. They are made warm and comfortable, and are kept clean by the men. I also had repaired old shacks at Sturgeon Narrows, lake LaCroix and Kinmipi lake. Will also erect this winter small huts at Robinson, Beaverhouse and Cache lakes. These huts are for use over night and during short periods that the rangers may be in the vicinity, and also to avoid having to carry tents when on patrol.

It is very difficult to get in supplies and building material to the Park during the open season. The road over the portage one and one-half miles from Kawene station to Eva lake is very rough. I built a barge on Eva lake to transport my horses and supplies to and fro. The portage over which we pass from Eva lake to French lake is twenty-seven chains in length over a very high hill.

Owing to my time being taken up during the summer with building operations and travelling over the several beats, erecting shelter huts, etc., I did not succeed in looking over the ground on the portages out to the station, as I intended, with a view of securing a better road, but will do so as soon as possible. I cut a new winter road from French lake to Eva lake by way of Brown's lake, so as to avoid a long round by the summer route and also avoid portaging at open narrows. I cut trails from French Portage to Windigoostigwan lake one and one-half miles, and one from Windigoostigwan river to Baptism lake, two miles, Baptism to Cache lake, three miles, also from Pickerel to Jessie lake and from Basswood lake to Small Inland lakes. At Eden Island the two rangers stationed there have cleaned out several old trails besides cutting new ones from Quetico and Beaverhouse lakes to inland points. The Park staff during the past year has been composed of eleven men, one of whom came on lately, a superintendent and a housekeeper. During the trapping season the work of the staff is in patrolling the sections over which they have charge to prevent illegal trapping and hunting as well as other breaches of the Park laws.

My men travel in pairs; when building huts four go together until the heaviest of the work is done, when two go on patrol. In many cases the area covered contain many water stretches and are easy of access, although in some portions many portages are encountered making travel, especially during fly season, very bad. I feel that I have a good staff and that they have done excellent work during the past season, when it is considered that they had to undergo many hardships in getting things into shape, did without shelter huts or trails, and had to portage outfits and supplies through snow and over rough ground. I fully realized when I came here that we had lots of hard work to do and expect much more before we can get things in proper shape.

I do not consider that much illegal trapping was done last season. We picked up some steel traps along the boundaries and destroyed several dead-falls, presumably set by Indians. As it is now well known by outside trappers and Indians that the Park is patrolled by rangers at all seasons there is not likely to be much trapping or hunting done. I have instructed my rangers not to relax their vigilance and not to hesitate to arrest anyone whom they find breaking the Park laws. I have warned them especially in regard to American Indians coming across the border to trap in Canadian territory, but to endeavor to keep on good



terms with our Canadian Indians. It is a difficult matter to distinguish between Canadian Indians and those from the American side. Some of them claim to belong to both sides and to draw treaty money from both Governments, and unless personally known to the rangers they pass themselves as Canadian Indians. There are no Indians at Reserve No. 24-C near the eastern boundary, but quite a few on Reserve 25-D at the mouth of the Namakan river. They do not seem to cultivate any portion of the Reserve, but subsist by hunting and fishing. I endeavored last summer to engage two of them as fire rangers but could not do so; they do not seem inclined to work.

I am pleased to inform you that the season has passed without any serious fire in the Park. One small fire occurred on a small island in Elprior lake and one along the southern boundary, both of which were extinguished before any damage was done. Another fire occurred at Johnston's Point on Basswood lake. This fire was started by some unknown person or persons during the month of August in the place where rangers Johnston and Darby did their cooking while erecting a shelter hut on the point. It is supposed these parties went off leaving the fire burning. The rangers were absent at the time up Basswood river. Returning they noticed the fire but could not get it under control until the newly erected walls and roof of the hut were destroyed. They were fortunate enough to save their blankets, provisions, tools, etc., by taking them to the water. About ten pine trees only were burned. They had to rebuild the walls of the hut.

My men during the summer months take every precaution to prevent fire by constantly patrolling their beats and looking after tourists, of whom quite a few passed through the Park last season. So far we have not experienced any trouble from tourists. They are in all cases provided with copies of the Park regulations, and we give special warning in regard to fire. In addition to our regular staff we had eight fire rangers on duty during most of the season.

In regard to the timber in the Park, it is chiefly red, white and jack pine, of excellent quality, and in immense quantities, especially white pine. The balance of the timber is spruce, balsam, cedar and birch. Most of the hills in the eastern portion over which fire ran some years ago, are covered with scrub spruce and jack pine, making an excellent shelter for game of all kinds.

The red and white pine in the vicinity of Jean, Quetico and Beaverhouse lakes and in several other portions of this Park is wonderful; as an old bushman I must say that I have never seen any timber to equal it. The Province has an asset worth protecting. The natural waterways of the Park as well as the splendid lakes of clear water will, in time, make it an ideal summer resort for tourists.

Many tourists passed through the Park last summer, mostly Americans, but some from Brandon and Winnipeg, Manitoba. Some parties have requested the privilege of building cottages or leasing portions of land for summer resorts. This I would not approve of except in localities near headquarters, or in places where there is no valuable timber. I would advise keeping the Park in a state of nature as much as possible.

I would advise an extension of the Park boundary to the North by taking in that section of country commencing at a point where the boundary line between the districts of Thunder Bay and Rainy River crosses the Canadian Northern Railway, thence following the line of railway westerly to a point east of the village of Atikokan, opposite the northeast corner of Timber Limit G-43, thence southerly along the east line of said limit to where it touches the north shore of Batchewaung lake, thence following the present boundary west from there. In this terri-

tory are many small lakes, some of which are not shown on the maps, and many containing great quantities of trout. It is also the resort of many moose and red deer, as well as smaller game animals.

Moose are very plentiful, great numbers of them being seen during summer, French lake, French river, Pickerel lake, Maligne river, Quetico lake and river being the principal places where moose abound. Several came on the beach and in the bay opposite the buildings last summer. They are now all in the hills north of French and Pickerel lakes. Many moose calves were seen also during the season. Red deer are numerous. Many were seen during summer along the shores of lakes and rivers. Partridges are scarce. I am inclined to think this is on account of the numbers of foxes, coyotes and skunks in the woods. Coyotes are very numerous. Wolves have often been seen; tracks of these animals are often noticed on the ice in winter. I am encouraging my men to poison them when possible. One of my rangers got one on the Maligne river last winter; in several cases bait was taken also. This season we expect to be in a better position to get them.

Beaver are increasing rapidly; where only one house or pond was to be seen last year many are now seen. Mink are often noticed in the streams. Some otter trails were observed last winter. I have not yet seen any muskrat or signs of them. Weasels are plentiful. Bear signs are very numerous. Two moose calves were killed by bears in June last at Pickerel lake.

The lakes are well stocked with trout, pike, pickerel, whitefish, and some other varieties of fish. Only in two lakes in the south are bass to be found. There are no speckled or brook trout in the Park. I would strongly urge the placing of speckled or brook trout and bass in some of the lakes and rivers near headquarters. The lakes and rivers are clear and clean, ideal breeding places for trout and bass. Ducks are very scarce. A few of the eatable varieties were seen in spring and early summer, but disappeared later on. Sawbills and other fish-eating varieties were the only ones remaining all season. There are no feeding grounds for them in the lakes. If wild rice or celery were placed in some of the lakes, I have no doubt many more ducks would breed and remain in the district.

Owls are very large and numerous in the Park. I shot two large hawks on a nest last spring and found several portions of partridge and a portion of a young fawn. I have advised my rangers to kill and destroy owls and hawks whenever possible. Another menace I see in the Park is the porcupine. In many places I have noticed pine trees girdled by those animals, noticeably so in the pine hills on Eden island and along Pickerel lake. I would advise killing off these animals, especially in pine forests.

During the present winter, or as soon as the ice is fit for travel, it is my intention to go over as much of the Park as possible and see for myself some portions of the interior not yet visited, locate sites for new shelter huts and portages, and obtain as far as possible an idea of the lie of the lakes and streams, kinds of timber, etc. This travelling must be done with snowshoes and toboggans, taking tent, provisions and blankets along. I find it is impossible to obtain a dog team in this country.

I have the honour to be, Sir,

Yours very respectfully,

A. J. McDONALD,  
*Superintendent.*

*Appendix No. 38.*

## REPORT OF THE FORESTRY BRANCH.

PARLIAMENT BUILDINGS, Toronto.

SIR,—I have the honour to submit the following report of the Forestry Branch for the year ending 31st October, 1914.

The work of this branch has been devoted largely to questions of reforestation. The Provincial Forest Station in Norfolk County, which was established in 1908, now contains 1,580 acres, of which about 50 acres are devoted to Forest Nursery work.

The Forest Nurseries at this station now contain the following stock:—

White Pine . . . . .	409,000
Scotch Pine . . . . .	205,500
Red Pine . . . . .	137,280
Jack Pine . . . . .	101,400
Bull Pine . . . . .	19,100
White Cedar . . . . .	47,000
Hard Maple . . . . .	18,000
Soft Maple . . . . .	20,000
White Ash . . . . .	22,000
Black Walnut . . . . .	9,620
Black Locust . . . . .	5,000
Red Oak . . . . .	5,000
Carolina Poplar . . . . .	7,250
Black Cherry . . . . .	2,850
Miscellaneous . . . . .	96,600

Net Total . . . . . 1,105,600

A portion of the nursery stock grown here is used for distribution throughout the province to those desiring to make forest plantations or reclaim waste land. During 1914 over 400,000 plants were sent out to other parts of the province for experimental or demonstration planting.

This nursery also provides the planting material for experimental work at the local Forest Station. During this last season 50 acres of various types of land were planted. Plantations have been made with White Pine, Red or Norway Pine, Scotch Pine, Larch and Chestnut.

Forest planting will, to a large extent, be done upon the poorer, non-agricultural soils. The coniferous trees, and especially the pines, have proven the most satisfactory for such planting. In the next few pages a brief description is given of the operations of nursery work and final planting, as carried on at the Norfolk Forest Station.

Artificial reforestation is done by broadcast sowing of seed, by planting the seed on prepared spots and by the use of nursery grown plants. Planting with nursery grown stock has largely replaced methods of direct seed sowing. This is especially true of such species as our native pines.

Forest seeds may be obtained from dealers or collectors, and are satisfactory if the origin of the seed is known. White pine seed may be obtained at prices



ranging from 75 cents to \$2 50 per pound. Red or Norway Pine may be obtained at prices ranging from \$4.00 to \$7.00 per pound.

Seed beds are made four feet wide and thirty feet long, with a protective covering as shown in Fig. I. This lath screen, giving half shade, is raised twelve to eighteen inches above the beds, and is required to protect the seedlings from the excessive summer heat.

Seed may be sown in autumn, or in spring as soon as the growing season opens. The seed may be sown broadcast or in rows. The method followed at the Norfolk Nursery is to sow in rows about four inches apart. The depth of covering the seed depends upon the nature of the soil. One-eighth to one-quarter of an inch should be satisfactory, but this is largely a question of being able to keep moisture at the surface during the germination of the seed. Evergreen seeds will take from fifteen to twenty-four days to germinate.



Fig. I. Showing view of seed-beds at the Provincial Forest Station, showing use of woven lath screen.

The chief difficulties to be met are attacks by birds, as the plants are just showing; sun scorch from allowing the ground to dry out too much or through lack of shade, and attacks of "damping-off" fungus, which is often troublesome during hot sultry weather when there is too much moisture in the soil.

The seedlings are usually left in the seed-beds for two years. The protective screens may be taken away at the end of the first season. At the end of the second season the White Pine plants are three to five inches high and are ready for transplanting to nursery lines as shown in Fig. III. This transplanting prepares the plant for final planting, in that it produces a stocky plant with a compact root-system, as shown in Fig. IV.

In some cases the one or two-year old seedling is used for final forest planting without this special preparation. For planting upon favorable soils, where protection exists and where the struggle is not too severe, the one-year old Scotch Pine or the two-year old White Pine seedling may be used. In much of the forest plant-



Fig. II. Showing two-year-old White and Red Pine in seed-beds, with shades rolled back.



Fig. III. Showing transplanted Scotch Pine in nursery lines. This material is ready for final planting upon waste lands.



ing being done by this branch, where exposed sites are being planted the sturdy transplant is desirable.

In forest planting two men usually form a working unit. One man prepares the hole with the mattock or spade and the other sets the plant. The plants are usually carried in pails half filled with water. This is done to prevent drying out of the roots and is a very necessary precaution. Where the planting area is covered with turf and not too rough, it is often advisable to make a shallow furrow with the plow as shown in Fig. V. The plants are spaced from five to six feet apart each way. At five feet apart an acre requires 1,742 plants. In forest planting it



Fig. IV. Showing three-year-old transplants of White Pine (on left) and Scotch Pine ready for final planting.

is necessary to plant many more trees than will eventually be found in a mature forest. If trees with clean, tall stems are desired, it will be advisable to plant close, in order to kill off the side branches and force the trees in height growth. Close planting also gives earlier soil protection, preventing the growth of grass and weeds.

It has been found that three-year old White Pine transplants ready for final planting cost about \$3.50 per thousand. In planting gangs of ten or twelve men the men should average 1,200 plants per day. Based upon these figures the following





Fig. V. Showing the use of shallow plow furrows in forest planting.



Fig. VI. Planting forest trees with mattock where ground is rough and stony and unfit for use of plow.

is an estimate of the cost of planting upon favorable soils as found at the Norfolk Forest Station:—

One acre, planted 5 x 5 feet, requires 1,742 plants.	
Cost of 1,742 plants, at \$3.50 per 1,000 .....	\$6 10
Cost of labor in planting 1,742 plants, at \$2.00 per day ..	2 90
	<hr/>
Total cost per acre .....	\$9 00
One acre, planted 6 x 6 feet, requires 1,210 plants.	
Cost of 1,210 plants, at \$3.50 per 1,000 .....	\$4 24
Cost of labor in planting 1,210 plants at \$2.00 per day ..	2 02
	<hr/>
Total cost per acre .....	\$6 26

The cost of restocking lands such as are being dealt with in Norfolk, should not average over \$8.00 per acre and with better organization this cost can be lowered. To plant cut-over and burned-over areas which exist in the central part of Ontario the cost will run from \$8.00 to \$12.00 per acre.

At the present time it is not feasible to undertake artificial reforestation upon the burned-over lands in the newer portions of Ontario. It will be necessary to have more intensive organization and better insurance against fires before this problem can be undertaken. When our people are fully educated to the necessity of protecting forest growth, the methods and technique of forest planting will be the least of our problems in restocking those denuded areas upon which natural growth of value has failed to reproduce.

In this connection it may be of interest to outline the life history of one or two of the typical northern trees. This will be done with the idea of explaining the methods of nature in producing forests. The life history of the White Pine will do for that class of trees known as Conifers or Evergreens.

White Pine trees begin to produce seed at from twenty to forty years of age. The seed is produced in cones, which are borne on the terminal branches in the upper parts of the tree. These cones are two seasons in coming to maturity. They mature at the end of August of the second year. The scales of the cone open and release the seed through the action of the sun and drying wind. All seeds of any value have fallen from the cones by the middle of September, and the empty cone may remain upon the tree for weeks or even months.

The frequency of seed years for White Pine depends upon climatic conditions and ability of trees to obtain plant food. Heavy seed years seem to occur through certain regions every five to seven years. In Southern Ontario large, healthy roadside trees frequently produce seed year after year.

One pound of White Pine seed may be obtained from one to two bushels of cones, depending upon the vigor of the parent tree and upon seasonal differences. One pound of seed contains from 25,000 to 30,000 seeds, depending upon the size and quality of the cones.

The seed of the White Pine is about one quarter of an inch in length and is provided with a thin, delicate wing, as shown in Fig. XI. The dry, warm winds of early September open the cones, releasing the winged seed, which is often carried a considerable distance before reaching the ground.

Owing to many enemies only a small proportion of seed reaching the ground ever germinates and grows. The seed is much sought after by birds, squirrels and mice. The plants produced by the small proportion of seeds which germinate after reaching the ground have still another struggle. The White Pine seedling is at first a



Fig. VII. Shifting sand at the Provincial Forest Station planted with Scotch Pine and Jack Pine in 1910.



Fig. VIII. The 1910 plantation as shown in Fig. VII after two seasons of growth. This photo was taken in 1912.





Fig. IX. Sandy ridge at Provincial Forest Station being planted with Scotch and Jack Pine in 1909.



Fig. X. The 1909 plantation as shown in Fig. IX after six years' growth. This photo taken in 1914.

delicate plant, as shown in Figs. XII and XIII. At one year of age it is only about two inches high with a delicate tissue. During this first season the young plant is subject to injury by parasitic diseases and sun scorch, and is subject to attack by birds. When two years old the seedling is only three to five inches high. Light ground fires, which apparently do little damage, destroy countless numbers of these small plants. For the first three years the growth of the seedling is very slow and it is subject to many enemies. It will readily be seen that under the most favorable conditions only a small percentage of the seed falling to the ground ever produces young pine large enough to be seen by the casual observer.

Another factor influencing the chance of obtaining reproduction of White Pine is the question of the vitality of seed. Pine seed under the most favorable condi-



Fig. XI. Showing White Pine cones. Mature two-year-old cones below and small one-year-old cones at tip of branch.

tions of artificial storage, soon loses its power to germinate and grow. Pine seed lying, under natural conditions, where it is subject to various changes of moisture and temperature would not be likely to grow after five years.

Some of the outstanding features in the life of the White Birch will do to show the ability of this class of trees to reproduce. The Birch produces its seed in a cone-like fruit, which often remains on the tree throughout the early part of the winter. Unlike the White Pine the seed does not all fall to the ground in early autumn, but gradually falls throughout the winter months. It is a common sight to see the small, winged seed of the birch being carried for miles on the surface of the snow. This is one factor explaining the prevalence of Birch on burned and cut over areas.

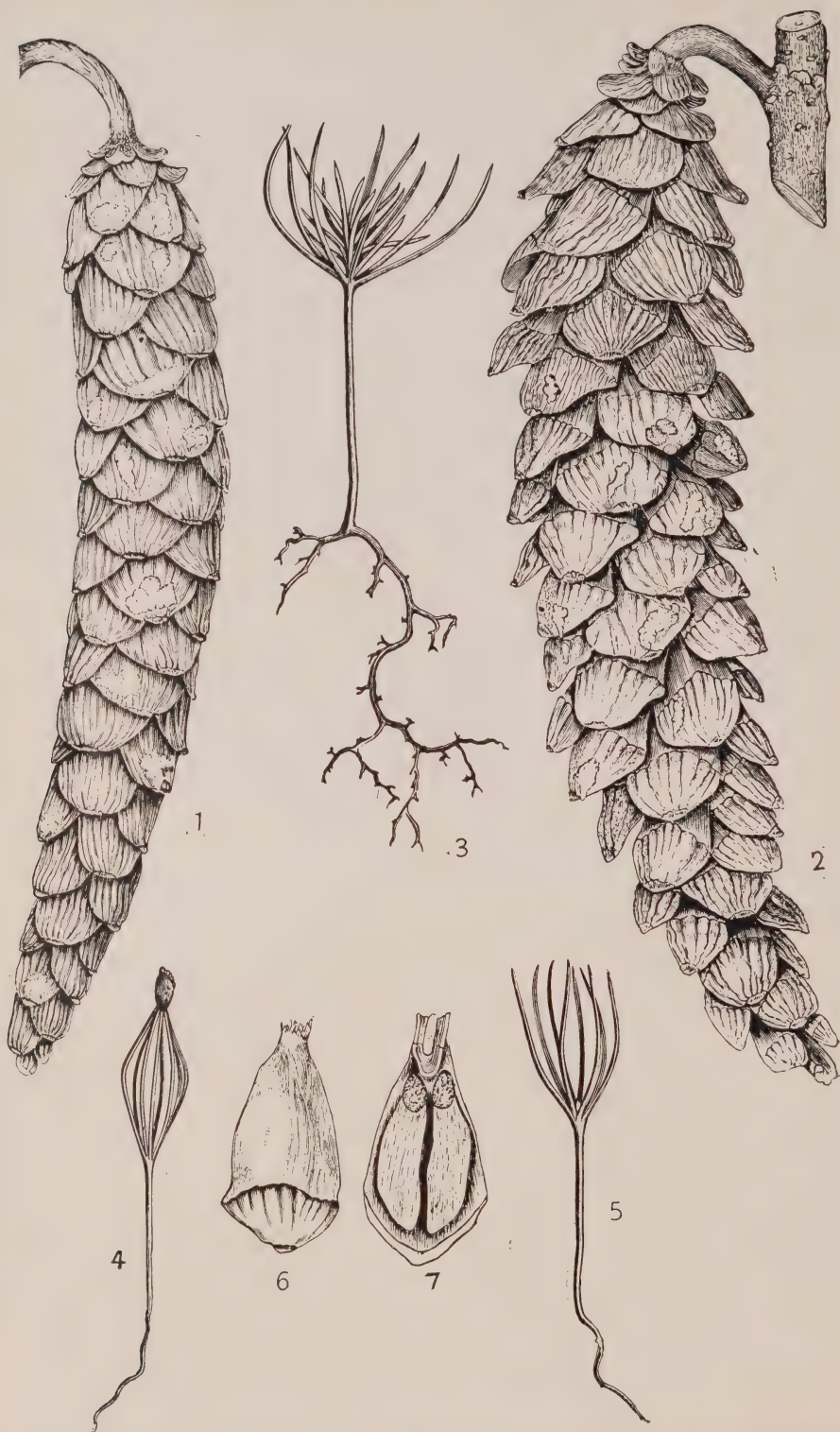


Fig. XII.—1 and 2. Showing mature White Pine cones. 3. Showing one-year-old seedling. 4 and 5. Seedling just after germination. 6. Individual scale from cone. 7. Scale showing winged seeds.



The Birches are also able to reproduce from the stump or roots. This sprout growth often follows light fires and cutting operations. The ability of Birch, Poplar and many of the hardwoods to reproduce by this method explains why many cut or burned over areas reproduce with Birch, Poplar and other hardwoods.

The Pines can reproduce only by the seed method and are therefore handicapped at first in the struggle to take possession of cut over areas. The Pine has, however, the advantage of being able to start under the shade of the Birches and Poplars; to gradually struggle through, and, owing to the short life of the Birches and Poplars, to eventually overcome them.

There are few of our White and Red Pine areas which would not become restocked if it were possible to prevent fires from sweeping over them. Many of the regions which were cut over in the earlier days of lumbering have produced splendid second growth White and Red Pines. In these earlier operations only the choice



Fig. XIII. Showing one, two, three and four-year-old White Pine plants. Three and four-year-old plants are transplants.

trees were taken and a large percentage of seed trees were left. These areas testify to the ability of the Pines to hold their own in the struggle, if given a reasonable chance.

I wish to point out, however, that with the present methods of cutting, where everything in the shape of pine is taken out, it is not likely that we will obtain satisfactory new growth. Natural reforestation cannot bring back Pine upon regions in which no seed trees have been left. If Pine is desired upon these areas we shall eventually have to depend upon artificial methods or forest planting.

Respectfully submitted,

Minister of Lands, Forests and Mines.  
Ontario.

E. J. ZAVITZ,  
Forester.

*Appendix No. 39.*

## REPORT ON THE CONSTRUCTION OF ROADS IN NORTHERN ONTARIO.

(Under the Provisions of 2 Geo. V., chap. 2.)

TO THE HONOURABLE, THE PREMIER.

SIR,—I have the honour to submit a General Report of the work done in the construction of roads in Northern and North-western Ontario during the season of 1914, in conformity with the provisions of 2 George V, Chapter 2.

The season's work commenced about the 1st May, except in a few instances where it was found profitable during the winter season to crush and haul rock material and gravel, construct bridges, and take out timber.

The season was the most favourable we have had for road construction since it began in 1912; during the months of July, August and September, the weather was dry, and good progress was made on the work.

The operations extended from the Petawawa Military Camp on the Canadian Pacific Railway on the east, to the Lake of the Woods on the west; along the line of the Canadian Northern Railway north of Sudbury; along the Temiskaming and Northern Ontario Railway and its branches, from Haileybury north to the Transcontinental Railway; along the latter railway between the Abitibi River on the east and the town of Hearst on the west; along the Soo branch of the Canadian Pacific Railway from Echo Bay to Blind River; and south along the Grand Trunk Railway from Callander to near Powassan; in the valley of the Rainy River; and also in the mining districts around Porcupine, Kirkland Lake, Larder Lake and the Montreal River.

Labour was more plentiful than in previous years, and there was no difficulty in securing all the men required from among the settlers and residents in the districts. Little or no foreign labour was employed, except in the construction of ditches and taking out rock cuts. During the months of June and July, from 4,500 to 5,000 men were engaged on the work. The work was rushed during the early part of the season, owing to the very favourable weather, and in order to allow the roads to dry out before the rainy season began. The work, however, continued during the entire season. At present there are about 225 men engaged in the construction of roads and bridges where it is found at all profitable to carry on work.

During the season up to the 31st October, the sum of \$802,578.19 was expended on roads and on experimental farm plots in different places along the Transcontinental Railway. 708 miles of road was under construction, of which 255 miles is new road cut out of the forest. 296 miles of road was graded; 108 miles was surfaced with gravel or crushed rock; 214 miles was partly graded or improved by cutting down hills, ditching, and in other ways improving the grades; 40 bridges were constructed, the longest at Matheson across the Black River, having a length of 650 feet, and a steel bridge at Kakabeka Falls, west of Fort William, 300 feet.

In addition to the construction of roads and bridges, three experimental farm plots were started along the Transcontinental Railway; one near the town of Cochrane, one 50 miles west at the Groundhog River, and one at the town

of Hearst, 130 miles west of Cochrane. The land on which the experiments were made was chopped and cleared in the early part of May, and planted at different intervals between the 15th May and the 1st July. In the growth of grain, roots and vegetables, good results were met with, as in nearly every instance they matured. Spring wheat, oats, barley, rye and peas were not damaged by the summer frosts and were of good quality, and compared favourably with similar crops in Older Ontario. Potatoes, cabbage, onions, carrots, radishes, etc., did exceptionally well and produced large yields, maturing early in the season. Beans, corn, tomatoes and a few other vegetables were more or less injured by the summer frosts, but not more so than in parts of Old Ontario. Where the land was well cultivated and drained and fairly large clearings made, the settlers throughout the district did not suffer materially from summer frosts.

Judging from the crops we produced with a reasonable amount of cultivation, I am confident that there will be no great difficulty in growing almost all classes of grain and vegetables in Northern Ontario. Timothy, clover and alfalfa grow in great abundance almost everywhere along the line of railway both on the low and high lands, and did not suffer from the summer frosts; and good pasture was abundant up to the end of the first week in October.

During the months of July and August the weather was extremely dry and hot, but notwithstanding this fact, the growth of the crops was not much retarded where the land had been properly cultivated.

When inspecting the different districts along the roads which have been constructed during the last three years, I find that good progress is being made by the settlers; along these roads, nearly all the vacant land suitable for settlement is being taken up and improved. In the valley of the Rainy River exceptional progress has taken place; the settlers are now able to reach markets along the Canadian Northern Railway, which three years ago were inaccessible. Heretofore where no roads were constructed, the settler was merely marking time; since the construction of roads, he has taken courage, and is now clearing up large areas of land, and in other ways improving his social condition. This will apply to almost all the sections where good roads have been constructed. It has encouraged the settlers to build schools, and has made it possible for the children to attend them. This in itself has done much to stimulate settlement, as in the past the want of schools and their inaccessibility for lack of roads, I have found to be one of the great obstacles in the way of settlement.

Along the Sault Ste. Marie and Sudbury trunk road; along the trunk roads extending in different directions out of Port Arthur and Fort William; between North Bay and Mattawa; from Sudbury into the agricultural sections to the north and east, the roads are now in such a condition that the settler can reach a market at all times of the year; it has given to his products an increased value, and has removed much of the monotony heretofore found in the life in the new districts. On most of the main trunk roads it is now possible to travel over them in an automobile, and what is probably of greater importance, it has made it possible for a farmer at a distance of from 15 to 20 miles to market his produce, and return the same day.

Splendid progress has been made in the country north of Haileybury along the line of the Temiskaming and Northern Ontario Railway and its branches, in the way of clearing up land.

Along the Transcontinental Railway settlement has not taken place as rapidly as might have been expected, but a good deal of this is owing to the



fact that up to the present time the regular trains have not been run, as the road has been in the hands of the contractors.

Last season was extremely favourable for the clearing up of land, owing to the dry weather, and the settlers in many instances have taken advantage of this, so that during the past season more land has been made ready for cultivation than during the two previous seasons. This applies to the country along the line of the Temiskaming and Northern Ontario Railway as well as along the Transcontinental Railway. If next spring is at all favourable, a much larger area of land will be put under cultivation, provided that the settlers are in a position to procure the necessary seed grain.

During the three years in which operations have been carried on under this Branch, 1,704 miles of road has been under construction, of which 744 miles is entirely new road cut out of the forest; 960 is old road improved; 914 miles was graded and ditched, 180 of which was also surfaced with gravel or crushed rock, and the balance improved by cutting down grades, renewing culverts and bridges, and ditched.

In the descriptions of the several roads hereinafter given, information will be found respecting the operations in the various districts.

Accompanying this report is a statement of expenditure in the different districts, and the number of miles of road constructed or under construction.

I have the honour to be, Sir,

Your obedient servant,

J. F. WHITSON,  
*Commissioner.*

STATEMENT OF EXPENDITURE UNDER 2 GEO. V., CHAP. 2, ON ROAD CONSTRUCTION, ETC., AND  
MILEAGE CONSTRUCTED.

(From 23rd May, 1912, to 31st October, 1914.)

	1912 miles.	1913 miles.	1914 miles.	Total miles.
New and old roads graded.....	39	500	405	944
New and old roads partly graded.....		40	214	254
New bush roads cut out ready for grading, and old roads improved .....	194	224	89	507
Total mileage under construction.....	233	764	708	1,705

No. of bridges constructed in 1914, 40.

District.	Expenditure to 31st October, 1913.	Expenditure year ending 31st October, 1914.
	\$ c.	\$ c.
District of Nipissing, North Bay to Mattawa and east to Pembroke, and south of Callander to Powassan, and west from North Bay to Sturgeon Falls . . . . .	83,313 38	79,086 92
District of Temiskaming, Haileybury, Englehart, Matheson, Charlton, Swastika, Elk Lake, Larder Lake .....	185,612 61	144,766 69
District of Temiskaming, Cochrane, Porcupine, Iroquois Falls and Transcontinental Railway from Quebec boundary west 125 miles to Groundhog....	413,228 30	127,997 62
District of Sudbury, vicinity of the Town of Sudbury and Mining District surrounding .....	118,568 32	49,526 42
District of Algoma, vicinity of Hearst along Transcontinental and Algoma Central Railways .....	22,396 32	24,226 29
District of Algoma, on Sudbury and Sault Ste. Marie Trunk Road .....	76,275 40	80,720 07
District of Thunder Bay, tributary to Port Arthur and Fort William .....	123,247 31	140,296 30
District of Kenora, vicinity of Kenora and Keewatin.	95,533 58	27,263 85
District of Rainy River, in Rainy River Valley.....	135,031 31	94,991 78
Experimental Farm Plots .....		9,035 11
General Administration Expenses .....	21,048 55	14,657 14
	1,274,255 08	802,578 19

ARTHUR E. D. BRUCE,  
Secretary and Accountant.

SUMMARY OF EXPENDITURE FOR THE THREE YEARS ENDING 31ST OCTOBER, 1914.

Description.	Year ending 31st Oct., 1912.	Year ending 31st Oct., 1913.	Year ending 31st Oct., 1914.	Total expendi- ture under each section.
Sec. 1 (a) Works and Improve- ments (Sewer at Hearst)...	.....	.....	\$2,100 00	\$2,100 00
Sec. 1 (b) Roads.....	\$193,082 80	\$1,081,172 28	791,443 08	2,065,698 16
Sec. 1 (d) Farms.....	.....	.....	9,035 11	9,035 11
Total expenditure under all sections.....	\$193,082 80	\$1,081,172 28	\$802,578 19	\$2,076,833 27

ARTHUR E. D. BRUCE,  
Secretary and Accountant.



## ROADS IN THE DISTRICT OF KENORA, IN THE VICINITY OF THE TOWNS OF KENORA AND KEEWATIN.

Number of miles of road graded (of which 9 miles were surfaced)..... 15

Operations on the Kenora and Keewatin roads began early in May.

The approaches to the Keewatin Station were repaired by cutting down and widening the rocky approach. A car load of cinders were spread over the approaches and a new ditch was opened up on the north side of the road.

The old wooden bridge from the Canadian Pacific Railway across the channel to the Village of Keewatin was improved by renewing all the old plank in the deck and repairing the railing.

The two steel bridges across the east and west branches of the Winnipeg River were also repaired. They had not been painted since they were constructed and both had to be scraped and repainted. The bridge over the east branch was given two coats of paint, and a portion of the bridge over the west branch also received two coats. A new deck was placed on the bridge across the east branch, also a new railing and wheel guard. The best tamarac plank, 3 in. x 10 in. and 3 in. x 12 in. all seasoned and surfaced on one side, was used. The old joists were replaced by new ones and a new railing was constructed and painted. All the rods were examined and the bolts tightened. These bridges are now in a condition to last for many years. The bridge over the west branch is 242 feet over all, 21 feet wide and is composed of one single span set on four steel tubes filled with concrete and set on cement foundations. There are two approaches, the one on the west end 185 feet long and on the east 150 feet. The bridge over the east branch is composed of three separate spans, the east one 124 feet long, the centre one 158 feet and the west one 140 feet long. The width is 18 feet 6 inches.

After completing these bridges, operations were commenced on the road constructed last season commencing about one-half a mile east of the Village of Keewatin and running north-west across Darlington Bay of the Lake of the Woods through the Township of Pellatt and in a westerly direction to Pelican Pouch Lake. This road was regraded and surfaced with gravel in places, and continued to a point 18 miles from Kenora. It is now in splendid condition, all the heavy grades being cut down and diversions made around hills which were heretofore impassable for heavy traffic. The distance can now be travelled over from Kenora with an automobile in one hour. This road now opens up all the good agricultural land north-west of Keewatin and Kenora.

## ROADS IN RAINY RIVER VALLEY, DISTRICT OF RAINY RIVER.

New roads cut and graded . . . . .	23.75 miles
New roads cut and partly graded . . . . .	6.25 miles
Old roads graded (including 29.5 miles surfaced with gravel) . . . . .	62.10 miles
Old roads partially graded or improved . . . . .	1.50 miles
Number of bridges constructed . . . . .	4

During this season work was carried on over 94 miles of road, the greater portion of which was completed. The grading of the trunk road between Fort Frances and Rainy River was finished and there are now 40 miles of gravelled road between these two places. There still remains about 22 miles of this road

to be gravelled, which, when finished, will be of great benefit to the district. In addition to the grading work, the main road was kept dragged where the traffic was heavy. Besides the work on the trunk road, a number of roads were built running north and south from the trunk road, which were badly required. This work may be described as follows:

*Township of Mather:*

Between Lots 6 and 7, Concessions 4, 5 and 6, three miles. This was a new road and was cleared and graded and culverts put in.

Between Concessions 3 and 4, Lots 5 to 8, two miles. New road cleared and graded and culverts put in.



New road under construction in the Rainy River Valley.

Between Concessions 5 and 6, Lots 6 and 7,  $\frac{1}{2}$  mile. New road cleared and graded. This road was put in to connect the old road with our new road between Lots 6 and 7 and to give a road to the school house.

East of Concession 1 and 2, Lot 1, one mile. This was old road which was graded up with the traction engine.

In the Township of Mather there is some very fine clay land. The high land was all burnt over a few years ago, and the land is easily cleared. The land along the road is well settled and the road will be of great benefit to the township.

*Township of Crozier:*

North boundary of Sections 13, 14 and 15, three miles. This is on the trunk road and was dressed up with the grader and gravelled.

East boundary of Section 21, one mile. Also part of the trunk road. This road was gravelled.

North boundary of Section 21, one mile. Also part of trunk road. This road was gravelled.

East boundary of Sections 32 and 29, two miles. This road was cleared and graded. It leads direct to the station at Crozier and greatly benefits the settlers north, as formerly they had to go several miles around to drive to the station. This road was continued two miles north into the Township of Miscampbell and is now the leading road for settlers to the north of Crozier. About a mile of this road was gravelled by the Municipality of Crozier after the grading was completed.

Road north of Sections 10 and 11,  $2\frac{1}{4}$  miles. This road was cleared and graded. There is a school house at the north-west corner of Section 11, and before the grading of this road it was very difficult for the children to get to the school. This road passes through good farming land all of which is settled on.

#### *Township of Kingsford.*

Road between Lots 8 and 9, Concessions 1 and 2, two miles. This road was cleared and graded.

Road between Concessions 2 and 3, Lots 7 to 10, two miles. This road was cleared and graded.

This four miles of road will assist greatly in bringing this township under cultivation. The land along these roads is all settled on and considerable improvements had been made although previously the settlers did not have a road to town.

#### *Township of Dobie:*

Road along north boundary of the Township of Dobie across Lots 1, 5, 6, 7, 8, 9, 10, 11 and 12,  $4\frac{3}{4}$  miles. This road was graded by the steam grader.

Road east of Lot 1, Concessions 1 to 6, three miles. This road was graded by the steam grader. This is one of the leading roads north in the district and should be gravelled next season.

#### *Township of Tait:*

Road along east boundary of Sections 1, 12 and 13,  $1\frac{1}{2}$  miles. This road was graded by the steam grader and is a continuation of the above road in the Township of Dobie.

#### *Township of Carpenter:*

Road along east boundary of Lot 11 across Concessions 1, 2 and 3 and north boundary of Lots 10 and 9, Concession 4, two miles. This road passes through a good farming country and was graded by the steam grader.

Road along the Carpenter and Burriss town line, Concessions 4, 5 and 6, three miles. This road was cut out and graded and gives an outlet to settlers who previously did not have a road. This road passes through good agricultural land and should be continued north and south.



*Township of Shenston:*

Road along the east boundary of Sections 1, 12, 13, 24, 25 and 36, six miles. This road was graded with the steam grader. This is the leading road north from the Village of Barwick, and runs through a well settled district and there still remains considerable good land to be opened up to the north. This road extends 13 miles north of Barwick and as the traffic is heavy it should be gravelled.

*Township of McIrvine:*

Road across lots 44 to 48 and west of Lot 48,  $\frac{3}{4}$  mile. This is part of the trunk road. This road was gravelled.

*Township of Barwick:*

Road commencing on east boundary of River Lot 1, thence westerly along trunk road  $2\frac{1}{2}$  miles. This road was gravelled.

River Lot 1, trunk road, built pile bridge span 110 feet.

*Township of Rosebery:*

Trunk road along the south and west boundary of section 2, one mile. This road was gravelled.

*Township of Dance:*

Concessions 2, 3 and 4 between Lots 8 and 9,  $1\frac{3}{4}$  miles. This road was cleared and grubbed.

Road across Lots 9 and 10 between Concessions 3 and 4, one mile. This road was cleared and grubbed.

Road between Lots 8 and 9, Concession two,  $\frac{1}{2}$  mile. This road was graded and ditched.

Previous to last year there had not been any road work done in the Township of Dance, excepting about  $\frac{1}{2}$  mile in Concession 1. There are now  $5\frac{1}{2}$  miles of road cut out and grubbed, 2 miles of which have been graded. The road cut out should be graded up next season. The south half of this township is good land and well settled and only requires roads to make it a first class farming country.

*Township of Atwood.*

Road across River Lots 1 to 24, three miles. This is part of the trunk road. It was graded and ditched and 2 miles of it gravelled. Road between River Lots 23 and 24, one mile. This road was graded.

*Wild Lands Reserve.*

Road commencing at the north-east corner of Lot 9 in the Township of Curran, thence north-easterly a distance of 4 miles. This road requires to be extended back a distance of 4 miles to give an outlet to the settlers in the Township of Spohn. The first 4 miles have been cleared and graded.

*Township of Blue:*

Road commencing at the north-east corner of Lot 34, thence east  $1\frac{1}{2}$  miles on north boundary of sections 35 and 36. This road was cleared, graded and ditched.

*Township of Pratt:*

Road across Concession 1, Lots 5 and 6,  $1\frac{1}{2}$  miles. This road is part of the Sleeman Grassy River road and was graded and gravelled.

*Township of Dilke:*

Road along east boundary of Section 24,  $\frac{1}{2}$  mile. This road was graded and ditched and 400 feet of tap drain dug.

Road along the south boundary of section 25, one mile. This road was ditched on each side and 914 feet of tap drain dug.

Road along the west boundary of Section 25,  $\frac{1}{4}$  mile. This road was graded.

Road across Section 26, one mile. This road was graded and gravelled.

Road north of Sections 35 and 36, two miles. This road was graded, 3 culverts put in and 6,458 feet of ditching done.

Road across Sections 27 and 28, two miles. Old road was re-graded and gravelled.

Road between River Lots 24 and 25,  $\frac{1}{4}$  mile. This road was gravelled.

*Township of Morley:*

Road along north boundary of Sections 20 and 21,  $1\frac{1}{2}$  miles. This road was double ditched and crosslay put down.

Road commencing at the north-east corner of Section 10, thence easterly 2 miles. This road was gravelled.

*Township of Pattullo:*

Road along east boundary of Sections 4 to 33, six miles. This was an old road that had been poorly built and was impassable. The 6 miles of road were graded, 2 bridges of 40 and 30 feet span put in, and ditches and tap drains put in to carry the water away. The first 3 miles of this road were gravelled.

Road east of Sections 24 and 25,  $1\frac{1}{2}$  miles. This road was cleared and grubbed. This road should be graded next season and continued back to the north boundary of the township. The settlers at present there have to pack their supplies on their backs and there is a good farming district to be opened up.

*Township of Worthington:*

Road across River Lots 1 to 9, one mile. This road was ditched and graded.

Road across River Lots 25 to 32, one mile. This road was graded.

Road across River Lots 41 to 48, one mile. This road was re-ditched and graded.

*Township of Lash:*

Road along the north boundary of Sections 25, 26, 27 and 28, four miles. This is part of the trunk road and was gravelled.

East boundary River Lot 41, built pile bridge, span 65 feet, on trunk road.

*Township of Devlin:*

Trunk road along the east boundary of Section 29, one mile. This road was gravelled.

Trunk road east boundary of Section 22 and north boundary of Sections 23 and 24,  $1\frac{1}{2}$  miles. This road was gravelled.

*Township of Burriss:*

Road across Concessions 1, 2, 3 and 4, between Lots 4 and 5, four miles. This road was graded and ditched and two miles gravelled. This is the leading road north of LaVallee, and previous to the work of this branch, part of the road was impassable in the summer. It is now one of the best roads in the district. This road should be continued north and the remainder gravelled.

*Township of Miscampbell:*

Road between Lots 8 and 9, Concessions 1 and 2, two miles. This road was graded and culverts put in. This is the main road in the township and was badly in need of grading.

*Township of Nelles:*

Road between Sections 14 and 15,  $\frac{3}{4}$  mile. This road was grubbed and ditched on one side.

Road between Sections 26 and 27, and 34 and 35, two miles. One mile and 500 feet of this road was double ditched and one mile cleared and grubbed. This road passes across a bad swamp and muskeg, but there is a lot of good land to the north which it will open up if continued.

Also five miles of tap drain were dug and 74 culverts put in.

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## FORT WILLIAM AND PORT ARTHUR DISTRICT.

Number of miles new road cut out .....	60.45
Number of miles graded . . . . .	32.5
Number of miles resurfaced with gravel .....	31.25
Number of miles partly graded or improved .....	76.20
Number of miles under construction .....	139.95
Number of bridges constructed .....	9

*Pigeon River Road:*

Work was begun on this road at the westerly limit of the City of Fort William, where re-ditching, re-grading and surfacing was done for 14 miles. On this stretch the first  $3\frac{3}{4}$  miles were gravelled, two hills having first been cut down and the road grades improved by deepening fills at low lying points. The next  $2\frac{1}{2}$  miles (being in an area of poor drainage having little fall for the escape of water) was surfaced with crushed rock. This rock was got at the foot of McKay Mountain, was crushed by a Blake crusher and distributed to a depth of 8 inches along the





Kakabeka Falls on the Kaministiquia River, twenty miles west from Port Arthur.

road. Two low lying spots (in all about  $\frac{1}{2}$  mile) were filled with boulder stone and these covered with gravel. The piers and stringers of a 24 foot bridge were renewed and three hills cut down on the remaining part of the above mentioned stretch. This road was then further extended for 11 miles; was cleared, grubbed, graded and ditched, and corrugated iron culverts set in place and three wooden bridges, each 40 feet in length, erected. The road at this point is at the settlement of Cloud Bay. A further stretch, 6 miles in length, was cleared and grubbed; this ends at the Pine River. The remainder of the road was surveyed and the centre line was cut out. The whole length of this road was found to be 37 miles, of which 12 miles remain to be graded. There is a road, with fair grades but narrow roadway, along the Pigeon River; 4 miles of which can be made use of in the extension of this road, leaving 8 miles to be cut out to complete the road to the Pigeon River or International Boundary.



Constructing a steel bridge across the Kaministiquia River at Kakabeka Falls;  
30,000 h.p. developed at this point.

### *Scoble Road:*

Hill cutting, re-grading and ditching was done on the first  $4\frac{1}{2}$  miles of this road along the town lines of the Townships of Blake and Scoble, and south-westerly in the Township of Scoble, together with about  $\frac{1}{2}$  mile of grading on the line between Lots 6 and 7 in the Township of Pearson, and a further distance of about a mile, on this line, was cleared and grubbed.

### *Arthur Street Road:*

The first 4 miles of this road was gravelled; the following mile was not improved (being a good sandy and dry roadway), the next mile and a half was gravelled, a bridge 20 feet long and two cedar culverts were set in place, and a



Pigeon Falls on Pigeon River on the International Boundary,  $1\frac{1}{2}$  miles from Lake Superior. A splendid water power; available head, 105 feet.



ditch and offtake, about  $\frac{1}{2}$  mile in length, was made. Then 3 miles of this road was re-graded, i.e., as far as the crossing of the Canadian Northern Railway. Five corrugated iron culverts were set in this stretch.

At a point about a mile west of the Canadian Northern Railway, where the road passes through a deep cut of shifting sand, the roadway was covered with clay to the depth of 18 inches for about 600 ft.

A 42 inch corrugated iron culvert was set in place and the fill, which had been of sand but had washed away, was replaced by a battery of logs and clay fill; this was at a point about 2 miles easterly from Stanley.

For about  $\frac{1}{2}$  a mile north easterly from Stanley the roadway was filled with boulder stone to a depth of one foot and the whole was covered with gravel.

Re-grading was done from Stanley for  $2\frac{1}{2}$  miles; a 36 inch corrugated iron culvert and 4 cedar culverts were set in place and the road was gravelled for 2 miles.

Clearing, grubbing and grading was continued for  $2\frac{1}{2}$  miles further to the Silver Mountain Road. Low spots were stone filled and covered with gravel, about  $\frac{1}{2}$  mile in all.

Clearing and grubbing was done from the Silver Mountain Road towards Hymers, about one mile in length, this being a diversion from the old road.

#### *Gillies Road:*

This is a diversion or cut off the present road. Clearing and grubbing was done for  $\frac{3}{4}$  of a mile on this proposed road. The diversion runs south from Hymers and is intended to overcome a steep grade and to reduce distance.

#### *Hardstone Road:*

From Hardstone Station, Port Arthur, Duluth, and Western Railway, to the Silver Mountain Road (or Arthur Street Road) near Stanley. Clearing and grubbing was done for  $2\frac{1}{4}$  miles on this road. This road is the outlet for the Whitefish Valley settlements.

#### *Oliver Road and Extensions.* (20 $\frac{1}{2}$ miles; of this 3 $\frac{1}{2}$ is new work.)

These roads were ditched, re-graded (including eight hills cut down to improve grades) and surfaced with gravel, shale or best material available (about 5 miles of gravel or shale). Four corrugated iron culverts and 5 cedar culverts were set in place. A steel bridge 300 feet overall, on concrete piers and abutments, was erected at the crossing of the Kaministiquia River, above the crest of Kakabeka Falls. This bridge consists of two spans of 90 feet each and has a concrete floor. The approach to the west of these spans consists of 4 spans of about 30 feet each. They also are of steel and have a wooden floor.

The new work on these roads consisted of 3 $\frac{1}{2}$  miles of road building, and 4 cedar culverts placed.

#### *John Street Road:*

This road was re-graded for 7 $\frac{1}{2}$  miles from the westerly limits of the City of Port Arthur. Three miles of this was surfaced with gravel.

*Dawson Road:*

This road was re-graded for 10 miles from the westerly limit of the City of Port Arthur, was thoroughly ditched and all culverts renewed, one 15 inch iron culvert was set in place and the piers and stringers of a 25 ft. bridge were renewed.

*North East Branch Road:*

North-easterly from the City of Port Arthur in the Township of McGregor. This road was graded for 6 miles and a further distance of  $4\frac{1}{2}$  miles was cleared and grubbed.

*Gorham Town Line Road:*

Road between the Townships of Gorham and McGregor. This road was graded for  $\frac{1}{2}$  mile and a further distance of  $4\frac{1}{2}$  miles was cleared and grubbed. A bridge 70 ft. overall was raised 10 ft. and the stringers were renewed.

*Gorham Road:*

Beginning at the north-west angle of the limit of the City of Port Arthur; thence north from the Dawson Road. This road was graded for 5 miles and a further distance of  $4\frac{1}{2}$  miles was cut out and grubbed.

*Dog Lake Road:*

Beginning at the Dawson Road at the intersection of the "6 mile creek" thence north. This road and its feeder was graded for 5 miles; the whole was gravelled and a bridge (50 ft. long) was renewed.

*8 Mile Road:*

Beginning at the Dawson Road and following the line between Lots 28 and 29. This road was graded for  $\frac{1}{2}$  a mile and a further distance of 3 2-5 miles was cut out and grubbed.

*Mud Lake Road:*

Beginning at the Dawson Road and following the line between Lots 10 and 11, Ware. This road was graded for about one mile and a further distance of  $4\frac{1}{3}$  miles was cut out and grubbed.

*Concessions 1 and 2, Ware:*

This road was cut out and grubbed for a distance of 3 miles.

*Concessions 2 and 3, Ware:*

This road was cut out and grubbed for a distance of  $4\frac{1}{2}$  miles.

*Kaministiquia Road:*

Beginning at the Dawson Road and following the easterly bank of the river. This road was cut out and grubbed for 4 miles.

Total clearing in the Townships of Ware, Gorham and McGregor, 32.63 miles.

*The McLaughlin or 3rd Line:*

A little over a half a mile of this road, near the Dorion station, where the same ran through a bad swamp area, was deeply ditched and gravelled.

*Road North Westerly from Ouimette Station:*

This road was ditched, graded, and the hills on the Coldwater River cut down, and for two miles the road was well gravelled.

*Road Easterly from Ouimette Station to Settlement at Dorion:*

Improved for 3½ miles. This road was ditched, graded and 9 cedar culverts were put in. In all low lying spots the roadway was raised and then well covered with gravel, about one mile of such gravelling was done on this road.

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THE SAULT STE. MARIE AND SUDBURY TRUNK ROAD; AND ST. JOSEPH ISLAND ROAD VIA CAMPEMENT D'OURS ISLAND.

New roads cut and graded .....	10.25 miles
Old roads graded (including 10.75 miles surfaced).....	14.25 miles

*Sault Ste. Marie and Sudbury Trunk Road:*

One mile of this road was surfaced immediately east of the Root River, between miles 5½ and 6½ east of Sault Ste. Marie. The material used was trap rock with a top course of limestone.

Two miles of trap in the single course were laid on heavy sand at Little St. Joseph Island, being on the 13th and 14th miles east of the Sault. This camp also made miscellaneous repairs on the section between the Sault and Echo Bay. It completed the embankments at Garden River Bridge built by the Public Works Department and erected railing on it and surfaced it with 200 yards of trap with a top course of limestone.

This camp was moved to Day Mills about the middle of July and commenced construction of section between that point and Iron Bridge. When the work



closed down for the season one and one-half miles had been cleared and brushed and graded and a quarter of a mile of gravel put down. Many of the old log culverts were removed and the new corrugated metal ones were not installed, this for the reason that the shipment of culverts did not arrive until the work had stopped. These culverts are stored at Dayton Station.

Culverts of corrugated metal were placed between Desbarats and McLennan and equipped with concrete ends. One-half mile of this section which was in bad condition was regraded and gravelled. The remainder of the section is in very good state of repair and it was decided not to do anything with it for the present. Three miles of road immediately west of McLennan's, being mile 24, 25 and 26 east of the Sault, were rebuilt, graded and gravelled. Several bad grades were cut down. Metal culverts were installed throughout, all with concrete ends.

A 40 ft. steel bridge on piled concrete abutments and with concrete floor was erected across the Shewfelt Creek. The embankments were equalized making an easy approach at each end.

At Bruce Mines a reinforced concrete culvert 6 x 8 was built two miles east of Bruce Mines. Three-quarters of a mile of road was graded and one-third of this surfaced with trap rock, 10 ft. wide and with gravel shoulders. This work is not yet finished. Culverts are on the ground ready for installation.

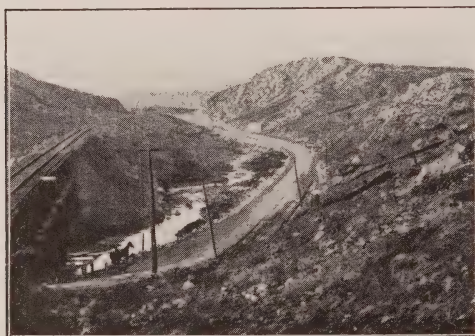
In this section a new route for the Trunk Road was arranged through the Town by agreement with the Council. The original survey ran north of the Town and involved construction of one and one-half miles of new road over boulder imbedded ground. The revised location goes through the centre of the town and requires construction of only half a mile of new road and this of an easy nature.

A road was cleared, built and graded across Campement d'Ours Island, intended, in conjunction with the ferry to be established, to furnish the settlers on St. Joseph Island an access to the mainland at Kensington Point and then with the Trunk Road at Desbarats, by means of road one and a half miles in length, on which work was done during the present season and which is subsequently referred to. This road, one and three-quarter miles in length, ran for its entire length through very heavy bush and over ground covered in part with boulders. On its completion at the end of June, operations were commenced on the building of a road on a new location between Thessalon and Nesterville. The new location is three and a half miles in length as against five miles for the old road and will be when finished, of a much superior nature, its bed being composed of sand and gravel as against clay for the old road. Two and a half miles of this section was cleared and grubbed, the balance being already open. One and one half miles have been graded and one mile gravelled; the rest being left uncompleted. In addition two miles of road immediately west of Nesterville, built during the season of 1913, was gravelled.

Four and a half miles of road was built and graded along the Mississauga River from a point eight (8) miles west of Blind River to a point twelve and a half (12½) miles west. On this section metal culverts were installed, all with concrete ends. The balance of the culverts to complete the road to Iron Bridge are on the ground. This camp also placed concrete ends on twelve (12) culverts installed during 1913, on the portion of road to the east. The road leading from Desbarats to Kensington Point, 1½ miles in length, was improved, by clearing along the sides, regrading and gravelling. Half a mile of gravel was laid and three-eighths of a mile through swamp was raised by filling in. Numerous boulders were removed from the southerly half mile of the road.

During the winter, early in 1914, three (3) miles south of Echo Bay were gravelled by contract. Also an outlet ditch one mile east of the Sault and one-half mile in length, was constructed to the River St. Mary, under contract. This was done to carry off to sufficient outlet, water from the Trunk Road which had been flowing across and damaging an adjacent farm.

The total amount of road covered with this season's work was  $24\frac{1}{2}$  miles of which three miles were surfaced with stone and  $7\frac{1}{4}$  gravelled. On all the road completed permanent metal culverts were installed with concrete ends. In addition one forty (40) foot steel bridge and a 6 x 8 reinforced concrete culvert were built. Culverts are on the ground to finish the whole division between Sault Ste. Marie and Blind River, with the exception of that part between Thessalon and Day Mills.



On the trunk road between Sudbury and the Murray Mine.

### ROADS IN THE SUDBURY DISTRICT.

In the Blezard Valley and north along the Canadian Northern Railway to Capreol Junction, and north-east from the Garson Mine to Wahnapiatae Lake.

Number of miles graded (of which 6 miles were cut out).....	28 miles
Number of miles resurfaced with stone and gravel .....	6 miles
Number of bridges constructed .....	5

Work was begun along the Canadian Northern Railway at Capreol Junction 20 miles north of Sudbury early in May. A trunk road was cut out southerly along the railway to Hanmer Station, 5 miles, to the line between Concessions 2 and 3, Township of Capreol. The first 3 miles of this road passed through a country chiefly gravel and sand, and the next 2 miles through a fairly good level agricultural country. From Hanmer Station the road was continued west along the line between Concessions 2 and 3, one mile, to the Village of Hanmer on the town line between the townships of Capreol and Hanmer; thence west between Concessions 2 and 3, Township of Hanmer for 4 miles across lots 1 to 8 inclusive. The work consisted in cutting out and widening a partly constructed old road. The road was well ditched and graded and all old culverts renewed. The country is level, well settled and under cultivation; the soil a light sandy loam.

The old road between Lots 6 and 7, Hanmer, was widened, ditched and well graded across Concessions 1, 2, 3, 4, 5 and part of 6, to the Vermilion River,  $5\frac{1}{2}$  miles.

A new truss bridge, 34 foot span, was constructed across Whitson Creek on Concession 6, Township of Blezard.

The trunk road graded and ditched last season from Sudbury north into the Blezard Valley was re-surfaced with crushed rock from the Stobie Mine road, where rock surfacing ended last season, north to the line between Concessions 5 and 6, Blezard, between Lots 6 and 7 for a distance of  $6\frac{1}{2}$  miles. Waste rock from the mines and from a mountain on Lot 7, Concession 4, Blezard, was crushed and 800 cubic yards per mile was spread on the road to a width of 9 feet, and well rolled with a ten ton steam roller. Several culverts or small bridges were



Tyadala Bridge, near the Spanish River, on the Soo branch of the C.P.R.; 140 ft. long.

renewed by large corrugated iron culverts. There is now a first-class stone road leading north from the Town of Sudbury into the agricultural valley of the Blezard, and a good clay and gravel road as far as Capreol Junction on the Canadian Northern Railway over 20 miles from Sudbury, which distance can easily be covered by automobile in less than one hour.

The town line between Capreol and Hanmer Townships, across Concession 2, one mile, was stumped and graded.

A road between the Townships of Hanmer and Blezard across Lots 1 and 2, one mile, and between Lots 2 and 3 across Concession 6, Blezard, one mile, was cut out and graded, and a bridge, 40 foot span, constructed across Whitson Creek on road between Lots 2 and 3. These roads will enable the settlers to reach the Canadian Northern Railway station at Bertrands or Hanmer.

A road between Lots 10 and 11, Concession 6, Hanmer, one mile was graded: also a road between Lots 2 and 3, Concession 6, Township of Lumsden, one mile.



and the trunk road between Concessions 5 and 6, Township of Rayside, across Lots 1 and 2, one mile.

The old bridge, which had become unsafe for traffic, on Lot 9, between Concessions 5 and 6, Blezard, was replaced by a new pile bridge, 36 foot span, with truss.

From the Garson Mine to Wahnapiatae Lake, a distance of 10 miles, the old timber road was widened, straightened and graded to enable a small settlement on Massey Bay, Township of Macleannan, to reach a market at Sudbury. This road also makes it possible to reach the nickel range west of Wahnapiatae Lake from Sudbury.

The old wooden bridge across Whitson Creek on Lot 4, between Concessions 2 and 3, Township of Balfour,  $1\frac{1}{2}$  miles south-west of Chelmsford, on the trunk road west of Chelmsford, which was unsafe for traffic, was renewed by a pile bridge 66 feet long with a 36 foot truss.

A new pile bridge with steel stringers 140 feet in length was constructed across the Tyadala River on the Sudbury and Sault Ste. Marie trunk road close to the Spanish River in the Township of Nairn,  $3\frac{1}{2}$  miles east of Nairn Station on the Algoma Eastern Railway. The old bridge had partly fallen down and was unsafe for traffic.

#### ROADS IN THE VICINITY OF AND TRIBUTARY TO NORTH BAY

New roads cut out (of which $3\frac{1}{2}$ miles were graded).....	26	miles
Old roads graded .....	$9\frac{1}{2}$	miles
Old roads partly graded or improved .....	25	miles
Old roads surfaced with gravel or stone.....	20	miles

#### NORTH BAY TO STURGEON FALLS TRUNK ROAD.

Operations on this road were commenced about the middle of June. The road extends from the western limit of the Town of North Bay westerly along the northern limit of the right-of-way of the Canadian Pacific Railway for a distance of about  $1\frac{1}{2}$  miles to the Duchesney Creek. From this point the road continues north-westerly crossing to the north side of the Canadian Northern Railway; thence along the north limit of the Canadian Northern Railway to a point about one-quarter of a mile from Beaucage Station. It then crosses the Canadian Northern Railway to the north limit of the Canadian Pacific Railway, and from this point it continues westerly adjacent to the north limit of the Canadian Pacific Railway until it reaches the west limit of the Indian Reserve. At this point it crosses to the south side of the Canadian Pacific Railway and follows the colonization road to the Town of Sturgeon Falls.

A careful exploration survey was made of the ground before the road was located. Several deviations around high rocks had to be made east of Beaucage. From Beaucage west to Sturgeon Falls the road passes through a very level country with scarcely a grade. Around the mountains good grades were found so that the road when completed will have few grades to interfere with heavy traffic. It passes through a country in places heavily timbered with birch, hemlock and other timbers. The finest timber, however, has been nearly all cut out. The road was cut to a width of 66 feet and in places it has been grubbed and is now ready for grading. In other places it has not been stumped.

The work has been continued since the close of the season and at the present time gravel is being drawn, and timber taken out for culverts and bridges. Abundance of good cedar for the construction of culverts is available along the road. Two car loads of corrugated iron culverts have been shipped on the road ready for use as soon as grading is resumed. The road has been well graded and good stone or concrete culverts constructed as far as Duchesney Creek. West of Duchesney Creek for about one mile the road has been well graded, although it will require to be surfaced with gravel in places where the soil is light and sandy.

Heretofore there has been no means of communication by road between North Bay and Sturgeon Falls, the distance being about 22 miles. When this road is completed the farmers in the vicinity of Sturgeon Falls and the small villages west, will be able to market their produce in North Bay. The road will also open up a large area of good agricultural land in the western part of the Reserve. The eastern part of the Reserve along the road is broken and rocky in places.

#### NORTH BAY AND MATTAWA TRUNK ROAD.

The trunk road between North Bay and Mattawa, the length of which is 50 miles, was constructed and graded during the season of 1913. As there was a great deal of traffic on this road it was badly cut up during the wet seasons, spring and fall, and it was found necessary to re-grade and surface with stone and gravel a large portion of this road.

A stone crusher was set up near Callander early in January, 1914, and was continued at work throughout the entire winter up to about the latter part of May. Crushed stone was hauled on to the road between Callander and North Bay for a distance of about  $6\frac{1}{2}$  miles. Six thousand cubic yards of crushed rock was spread on the road for a width of 12 feet between North Bay and Callander. It was well rolled with a ten ton roller.

Between Callander and Mattawa 13 miles of old road was re-surfaced with coarse gravel. Through the village of Bonfield, where the road was very narrow, it was widened by removing the large boulders from the side and well surfaced with gravel. The road between Callander and Mattawa is now in first-class condition. Most of the old culverts were replaced by cedar or corrugated iron ones. The ditches in many instances had to be deepened.

The old wooden bridge across the Amable du Ford River, in the Township of Calvin, was replaced by a substantial bridge, built on concrete piers and abutments, with steel girders; the length of this bridge is 130 feet.

The road is now in first-class condition and the distance, 50 miles, can be made with an automobile in about three hours.

#### CALLANDER TO POWASSAN ROAD.

From Callander south to Powassan, a distance of about 12 miles, there was an old road with bad grades, badly drained in places and impassable for heavy traffic. This road was widened out, ditched, graded and surfaced with gravel in places, for a distance of 9 miles. The road passes through a country in which there is considerable good agricultural land but broken in places by rocky ridges. The settlers have heretofore, had a good deal of difficulty in reaching a market for their produce, either at North Bay, Powassan or Callander. During the spring and fall of the year the road was always in a bad condition. It was necessary to cut down many of the hills in order to improve the grade. Good substantial cedar

or corrugated iron culverts were placed where required. The road was straightened out in many places.

The wooden bridge about three-quarters of a mile south of Callander, which had become unsafe for traffic, was replaced by a large stone culvert 8 feet wide, 6 feet high and 40 feet long.

CHISHOLM TOWNSHIP.

A branch road was constructed leading from the main trunk road into the Township of Chisholm; 3½ miles was cut out and widened, 2 miles of which was graded. This road was constructed for the purpose of giving to the settlers in Chisholm a good out-let to a market at Callander or North Bay. Part of the road is through a broken section. The road, however, opens up one of the best agricultural sections in the District of Nipissing. There is still about 2½ or 3 miles of this road to be completed.

PEMBROKE AND MATTAWA ROAD.

(From Pembroke to the Petawawa Military Camp.)

Number of miles of new road graded .....	2.0
Number of miles of old road graded .....	9.3

Operations were carried on commencing at the westerly limit of the Town of Pembroke, passing through the Townships of Pembroke, Stafford and Alice to the southern boundary of the Township of Petawawa, a distance of three miles, the remainder being through the Township of Petawawa to the Village of Petawawa on the main line of the Canadian Pacific Railway, a total distance of 8.3 miles.

For the first three miles we re-graded the old travelled road, it being necessary only to widen a few embankments and raise the grade line in a few places. The soil generally is light and sandy.

Through the Township of Petawawa we followed the old travelled road with the exception of two diversions, where by keeping adjacent to the north side of the Canadian Pacific Railway we avoided two level railway crossings in each case, and shortened the distance in all by about 200 feet. About two miles of this was through bush land, through which we cleared a right-of-way forty feet in width, removing stumps, etc., for a width of thirty feet. The first three miles is light sandy soil, making a very dusty road in summer. The remainder is fine gravel, not coarse enough for road metal but will afford a good foundation for a permanent road. The grading was performed by using scrapers and road grader, and when completed will be practically free from grades, as it runs through a fairly level plain, crossing only one short ravine.

The only road metal available will be crushed stone, and there is only one out-crop of rock along the road situated about one mile west of the Town of Pembroke.

On this road there is a considerable amount of traffic in summer months by automobiles: it being used by motorists and others going from Pembroke to the Petawawa Military Camps, and to the mouth of the Petawawa River, where a number of Pembroke citizens have summer cottages. The automobiles cut up the grading on the sandy portion of this road very badly, and it will be advisable to re-surface this road with either coarse gravel or crushed rock.





A Settler's House, Krugerdorf, Township of Catherine, T. & N. O. Railway.

HAILEYBURY AND SOUTH LORRAIN ROAD.

New road cut out ..... 10 miles.  
(Of which 7 miles was graded.)

Work was commenced on this road early in May, 1914, commencing at Argentite Ave. in North Cobalt on the line between Concessions 1 and 2, Township of Bucke, Lot 13, and continued in a south-easterly direction across the 1st Concession of the Township of Bucke, entering the Township of Lorrain on Lot 3, Concession 12, and continued in the same direction through the said township to a point in front of Paradise Bay on Lake Temiskaming, a distance of 10 miles.

The road was cut out, logged and graded for a distance of 7 miles; two bridges were constructed and several culverts built. The road in places was surfaced with gravel, and throughout its entire length was well ditched. Previous to starting operations, a survey was made from South Cobalt to the mining districts in South Lorrain. The road passes through a country which is broken in many places with rocky ridges; in the valleys however there is first-class farming land found in small areas.

ROADS IN THE VICINITY OF ENGLEHART AND CHARLTON.

Number of miles of new roads cut out, of which 3.5 were graded and 1 partly graded .....	9.5
Number of miles of old roads graded .....	5.5
Number of miles of old roads regraded or otherwise improved.....	45.0

*Townships of Pacaud and Catharine:*

Road along Pacaud-Catharine boundary across Concessions 1 and 2, two miles, partially graded; and one mile across Concession 3 cut and stumped.

Road on Chamberlain-Pacaud boundary, across Lots 3 and 4, one mile graded; and 1½ miles across Lots 5, 6 and 7 regraded and hills cut down.

*Township of Chamberlain:*

Road between Concessions 5 and 6, across Lots 3, 4, 5 and 6, two miles partly graded, and one mile of same cut and stumped.

Road between Lots 2 and 3, north from south boundary, widened and regraded four miles. The northerly two mile portion partially graded, and three large permanent fills made to replace bridges.

Road between Lots 9 and 10, across Concessions 1 and 2, graded two miles, and right of way widened from 30 feet to 66 feet.

Road between Concessions 1 and 2, across Lot 1, graded ½ mile.

*Township of Marter.*

Road between Concessions 3 and 4, across Lots 9 and 10, graded three-quarters mile.

Road on south boundary, across Lots 7, 8, 9 and 10 regraded two miles.



Crop of Oats in the Township of Marter.



*Township of Evanturel.*

Road between Concessions 5 and 6, across Lots 6, 7, 8 and 9, cut and stumped, two miles, and half-mile across Lot 6 graded; also half-mile across Lot 10 graded. A bridge across Blanche River was partly constructed; the piles and the west-erly approach were completed.

Road between Lots 10 and 11, across Concession 6 and part of Concession 5,  $1\frac{1}{2}$  miles, and  $6\frac{1}{2}$  miles of trunk road between Englehart and Heaslip regraded, and 2 miles graded.

Road between Concessions 1 and 2, across Lots 2, 3 and 4, stumped and parti-ally graded,  $1\frac{1}{2}$  miles.

Road between Lots 10 and 11, Concession 5, hills cut down and graded for southerly half-mile.

Road between Lots 11 and 12, Concession 5, stumped and graded one mile, and between Concessions 4 and 5, across Lot 12, stumped and graded  $\frac{1}{2}$  mile.

*Township of Armstrong.*

Road between Lots 5 and 6, across Concessions 4, 5 and 6, regraded three miles.

Road between Concessions 3 and 4, across Lot 6, regraded half-mile.

Road between Concessions 5 and 6, across Lots 4 and 5, stumped one mile, half a mile of which was graded.

Road on north boundary, across Lots 2, 3 and 4, stumped  $1\frac{1}{2}$  miles, and across Lots 7 and 8 cut and stumped one mile.

*Township of Dack.*

Eight miles on the Charlton-Englehart road widened, ditched, regraded and grades improved by cutting down hills; also culverts renewed.

Road between Lots 9 and 10, across Concession 6, widened and graded  $1\frac{1}{2}$  miles; also between Concession 5 and 6, across Lot 9.

Road between Lots 2 and 3, across Concession 6, regraded one mile.

Road between Concessions 4 and 5, across Lots 11 and 12, regraded one mile, and one 35-foot bridge constructed.

*Township of Savard.*

Road on south boundary across Lots 1 to 6, three miles widened and graded, and one 30-foot bridge constructed on Lot 5.

Road between Lots 6 and 7, across Concessions 1 and 2, two miles graded, and one 30-foot bridge constructed.

Road between Concessions 2 and 3, one mile new road partially graded and right of way widened; also two miles between Lots 8 and 9, across Concessions 3 and 4.

*Township of Robillard.*

Road between Concessions 4 and 5, across Lots 1 to 10, five miles;  $1\frac{1}{2}$  miles along Long Lake in Concession 5, and 1 mile of west boundary across Concession 6 widened and regraded, and cut down hills.

*Township of Sharpe.*

Road on east boundary, across Concessions 1 and 2, cut and stumped two miles.



Logging and Stumping Bee, Township of Evanurel.



Bridge across the Black River at Matheson, 650 feet long; T. & N. O. Ry.

### ROADS IN THE DISTRICT OF TEMISKAMING IN THE VICINITY OF MATHESON AND LARDER LAKE.

New roads cut out but not graded .....	6.50 miles
New roads cut and graded .....	9.25 "
New roads partly graded .....	12.5 "
Old roads graded .....	26.5 "
Old roads improved .....	26.00 "
Number of bridges constructed .....	3

Log jams and driftwood were cleared out of the Wahtaybeg River from Lot 9, Concession 3, to Lot 11, Concession 1, Township of Carr, to allow the settlers to drive pulpwood and logs to the pulp mills at Iroquois Falls and local saw-mills along the river.

Road on line between Lots 2 and 3, Concessions 1 and 2, Twp. of Carr, two miles, cut and graded.

First Street, Town of Matheson,  $\frac{1}{4}$  mile graded and one 36-inch corrugated culvert pipe placed.



Another view of Bridge at Matheson, T. & N. O. Ry.; 650 feet long.

Road on town line between Carr and Bowman, and Currie and Taylor; eight miles of road widened from 20 ft. to 30 ft. and culverts repaired.

On trunk road south from Matheson, along Temiskaming and Northern Ontario Railway, in the Twps. of Bowman, Hislop, and Playfair, grubbed two miles, graded six miles, and improved eight miles of old road.



Mining road from Larder Lake road to Huronia Mine, through the Twp. of Gauthier; six miles chopped, stumped and grubbed, two miles of which was graded.

Road between Concessions 3 and 4, Twp. of Carr, across Lots 1 to 4; two miles chopped, stumped and grubbed, and culverts put in from line between Lots 4 and 5 to town line, and  $1\frac{1}{2}$  miles chopped, stumped and grubbed between Lots 4 and 5, from Concession 5 to Concession 6.

Road on town line between Stock and Bond; chopped and graded  $2\frac{3}{4}$  miles across Lots 1, 2, 3, 4, 5 and part of 6.

Road between Concessions 2 and 3, across Lots 1 to 7, Twp. of Taylor,  $3\frac{1}{2}$  miles graded.



Harvesting Fall Wheat at the Ontario Government Experimental Farm, Monteith, T. & N. O. Ry.; yield, 35 bushels per acre.

Road between Concessions 2 and 3, Twp. of Carr;  $\frac{3}{4}$  miles graded, and on town line between Carr and Beatty, 2 miles graded from Concession 4 to Concession 6.

Road between Concessions 5 and 6, across Lots 2 to 7, Twp. of Taylor, three miles graded.

On road between Concessions 5 and 6, Twp. of Hislop; pile bridge, 25 foot span constructed.

Road between Currie and Bowman; three miles grubbed and graded across Concessions 1 to 3.

Road between Hislop and Bowman,  $1\frac{1}{2}$  miles graded across Concession 1 and part of Concession 2, and one mile regraded across Concession 3.

The old road from Swastika to Foster Mine was regraded in places for a distance of four miles.

The Larder Lake road, from Dane Station on the Temiskaming and Northern Ontario Railway, was repaired and culverts and small bridges constructed.



On a visit to the Ontario Government Experimental Farm, Monteith, T. & N. O. Ry.  
Oats yield 70 bushels per acre.



Constructing the Matheson Bridge, 650 feet long.



Road between Concessions 4 and 5, from Lot 2 to townline, Twp. of Taylor,  $\frac{3}{4}$  mile graded; and 1 mile graded across Concession 4 on town line between Carr and Taylor.

Road between Concessions 4 and 5, Twp. of Taylor; one mile chopped, stumped and grubbed across Lots 11 and 12. Also on Concessions 4 and 5 in Stock, one mile chopped, stumped and grubbed across Lots 1 and 2. Also on road between Taylor and Stock, one mile chopped, stumped and grubbed across Concession 3.

Road between Concessions 1 and 2, Twp. of Walker, across Lots 4 to 10,  $3\frac{1}{2}$  miles improved with grader; also  $\frac{1}{2}$  mile between Lots 10 and 11, Concession 2; also one mile graded from line between Lots 10 and 11, across Lots 11 and 12, to the town of Monteith; also  $\frac{1}{2}$  mile chopped and graded between Lots 10 and 11 north to Concession 3; also chopped, stumped and grubbed  $2\frac{1}{2}$  miles between Concessions 2 and 3, Walker; two miles graded,  $\frac{1}{2}$  mile chopped and graded from Concessions 2 and 3, between Lots 10 and 11.

Road between Concessions 3 and 4, across Lots 1, 2, 3 and 4, Bowman; two miles chopped, stumped and grubbed.

Road between Concessions 5 and 6, Hislop, across part Lots 9 and 10, one mile graded,  $\frac{1}{2}$  mile chopped across Lot 8. Also 1 mile chopped across Concession 5, between Lots 10 and 11.

Road between Twps. of Taylor and Carr,  $\frac{1}{2}$  mile graded across N. half, Concession 2.

Road between Taylor and Walker;  $\frac{1}{2}$  mile chopped, stumped and grubbed.

Road between Concessions 5 and 6, Stock; chopped, stumped, and grubbed, one mile across Lots 6 and 7; also  $\frac{1}{4}$  mile graded on Lot 3.

Cut down hill between Lots 4 and 5, Twp. of Bowman, south from Matheson, on Concession 5.

Road between Concessions 1 and 2, Twp. of Beatty; two miles chopped across Lots 9, 10, 11, and 12.

Road between Lots 4 and 5, Twp. of Carr; cutting down hills, across Concessions 2 and 3.

A new pile bridge was constructed across the Black River at Matheson, 650 feet long, with two 60 foot spans and twenty 28 foot bents. Also a bridge across Russell Creek  $\frac{1}{2}$  mile north of Matheson, having a length of 300 feet built on piles, bents 28 feet long. The approaches to each bridge were graded down and a rock filled abutment placed at the south end of the Matheson bridge.

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#### ROADS CONSTRUCTED ALONG THE LINE OF THE TRANSCONTINENTAL RAILWAY, EAST AND WEST OF THE TOWN OF COCHRANE, AND SOUTH ALONG THE TEMISKAMING AND NORTHERN ONTARIO RAILWAY, TO MONTEITH AND TIMMINS.

Number of miles of new road cut out (of which 50.67 miles were graded).....	56.57
Number of miles of old road reggraded . . . . .	27.50
Number of miles of old road burned . . . . .	40.00
Number of bridges built . . . . .	12

#### *Township of Bradburn:*

Road between lots 12 and 13, across Concessions 7, 8, 9, 10, 11 and 12, a distance of 4.7 miles. This road was cut last season (1913) but not all burned off. The burning and logging has been completed this season (1914).





Farm in the Township of Marter.



Rossing Pulpwood on T. & N. O. Railway, near Cochrane.

Road between Concessions 6 and 7, across Lots 1 to 22 to the Mattagamit River, 6.75 miles. This road was cut last season but not all burned off. Burning and logging was completed this season.

*Township of Calder:*

Road along the west boundary. This road was cut out last season but burning was not completed on  $6\frac{1}{2}$  miles. Burning and logging completed this season.

Road between Lots 16 and 17, across Concessions 7, 8, 9 and 10, three miles. This road was cut and graded this season.



New Roads along the Transcontinental Railway west of Cochrane.

Road between Lots 12 and 13, across Concessions 3 and 4. This road was cut out in 1912 but not completed. This season the grubbing was completed on  $1\frac{1}{2}$  miles.

Road between Concessions 6 and 7, across Lots 1 to 12. This road was cut out in 1912 but the grubbing was not all done. This season 1.3 miles of grubbing and two miles of grading was completed.

Road between Concessions 8 and 9, across Lots 13 to 18, 1.9 miles. This road was cut this season and Lots 15, 16, 17 and 18 well ditched and graded  $1\frac{1}{4}$  miles.

Road along the north boundary across Lots 1 to 4,  $1\frac{1}{4}$  miles. This road was cut, grubbed and burned.



*Township of Colquhoun:*

Road between Concessions 6 and 7, across Lots 18, 19, 20 and 21,  $1\frac{1}{4}$  miles. This road was cut last season but the burning and grubbing was completed this season.

*Township of Clute:*

Road along the west boundary across Concessions 11 and 12,  $1\frac{1}{2}$  miles. The road was cut, grubbed and burned and Concession 8 ditched for  $\frac{3}{4}$  mile.

Road between Lots 18 and 19, across parts of Concessions 4 and 5,  $\frac{3}{4}$  mile. This season the road from the Transcontinental Ry. to the Boskego River was burned off.

Road between Lots 12 and 13, across Concessions 7 and 8,  $1\frac{1}{2}$  miles, and across Concessions 1, 2 and part of 3 to the Transcontinental Ry., two miles, ditched and graded.



Headquarters of Northern Development  
Branch, Cochrane.



A Settler's Clearing, T. C. Ry., west of  
Cochrane.

Road along the south boundary across Lots 1 to 19, six miles. This road was cut out in 1912-13 and parts graded. This season the road was all well ditched and graded across Lots 1 to 19, both inclusive; a bush fire having destroyed the corduroy laid last season, the road required to be reditched.

Road between Concessions 2 and 3, across Lots 25 to 28 and 13 to 18,  $3\frac{1}{4}$  miles. This road was cut out; and lots 25 to 28 only,  $1\frac{1}{4}$  miles ditched and graded this season.

Road between Concessions 4 and 5, across Lots 1 to 9, from Frederickhouse River west across lots 11, 12, 13, 14 and 15, 4.4 miles. This road was cut, grubbed and burned off this season, and parts of lots 2 and 3 graded.

Road between Concessions 6 and 7, across Lots 25, 26, 27 and 28,  $1\frac{1}{4}$  miles. This road was ditched and graded this season.

Road between Concessions 8 and 9, across Lots 4 to 6, one mile, and 11 to 18,  $2\frac{1}{2}$  miles. Lots 4 to 6 were cut last season (1913) but not burned. This season these lots were burned and Lots 11 to 18 cut, grubbed and burned off. Road across Lots 24, 25, 26 and 27,  $1\frac{1}{4}$  miles, cut out and partly burned.

Road between Concessions 10 and 11, across Lots 11 and 12, .6 mile. This road was cut out this season and graded.

Road along the north boundary across Lots 1 to 6, two miles. This road was cut in 1912 but was not all burned or grubbed. This season the grubbing, burning and grading was finished.



*Township of Leitch:*

Road between Concessions 2 and 3, across Lots 1, 2 and 3, one mile. This road was cut, grubbed and burned this season.

Road between Concessions 6 and 7, across Lot 1, .4 mile. This road was cut last season (1913). This season it was graded and a good bridge, 25 ft. span, erected over a creek on Lot 1.

*Township of Blount:*

Road between Concessions 6 and 7, across Lot 28, .4 mile. This road was partly cut last season. This season the cutting, grubbing and burning was completed.

Road along the south boundary, across Lots 19 to 28. This road was cut and graded last season. This season the bad spots (owing to the destruction of corduroy by bush fires) on the road were repaired and a new bridge erected over Lillabelle Creek, the old bridge having been destroyed by a bush fire.



Constructing bridge at Frederickhouse River, five miles west of Cochrane; 200 ft. long.

*Township of Glackmeyer:*

Road along the west boundary. This road was cut and graded in 1912. This season it was in need of repair owing to bush fires and was regraded in places for a distance of  $4\frac{1}{2}$  miles.

Road between Lots 18 and 19, across Concessions 1 to 12. This road was cut and graded some years ago. This season parts of the corduroy were badly burned, and Concessions 7 to 12 were regraded,  $4\frac{1}{2}$  miles, and the corduroy partly renewed.

Road along the south boundary, six miles. This road was regraded this season owing to partial destruction by forest fires of corduroy in places, and rutting during the wet weather in the early part of the season.

Road between Concessions 4 and 5, Lots 1 and 2 to the Abitibi River and Lots 25 to 28 were cut this season. Lots 3, 4 and 5 and part of 6 were graded, also Lots 26 and 27,  $1\frac{3}{4}$  miles.

Road between Concessions 8 and 9, across Lots 13 to 18, were cut and graded, two miles this season, and Lots 19 to 28, 3.2 miles, graded. A 50-foot pile bridge was erected over Lillabelle Creek on Lot 23.

Road between Concessions 10 and 11, across Lots 13, 14 and 15, one mile. This road was cut last season (1913) but the burning was not completed. This season the burning was finished and two culverts constructed on Lot 13.

*Township of Kennedy:*

Road along the west boundary, a distance of 1.7 miles, across part of Concessions 3, 4, 5 and 6. This road was cut last season but the burning not finished. This season the burning was completed.

Road between Lots 12 and 13, across Concessions 7 and 8,  $1\frac{1}{2}$  miles. This road was cut last season (1913) but the burning was not finished. This season the burning was completed.

Road between Concessions 4 and 5, across Lot 27, .3 mile. This road was cut out and burned.

Road between Concessions 6 and 7, across Lots 1 to 16, five miles. This road was cut last season and partly burned; the burning was completed this season.

*Township of Fournier:*

Road between Lots 10 and 11, across Concession 6, one mile. This road was cut, burned and grubbed this season.

Road between Lots 8 and 9, across Concession 6,  $1\frac{1}{4}$  miles. This road was cut, grubbed and burned off this season.

Road between Lots 4 and 5, across Concession 6,  $\frac{1}{2}$  mile. This road was cut, grubbed and burned off this season.

Road between Concessions 3 and 4, across Lots 1, 2, 3 and 4, two miles. This road was cut, grubbed and burned off this season.

*Township of Lamarche:*

Road along the west boundary across Concessions 2 to 6. This road was cut and partly ditched last season. This season  $2\frac{1}{2}$  miles of the road was graded; and part of the road which was graded and corduroyed last season, but was burned by bush fires, was this season repaired.

Road between Lots 10 and 11, across Concessions 4, 5 and 6, three miles. This road was cut and graded.

Road between Lots 8 and 9, across Concessions 1 and part 2,  $1\frac{1}{2}$  miles. This road was cut in 1913 and this season it was burned and graded.

Road between Lots 6 and 7, across Concessions 2 to 5 and part of 1,  $4\frac{3}{4}$  miles. This road was cut last season. This season the road was all burned off and graded. Two pile bridges, one on Concession 2 and one on Concession 3, were constructed.

Road between Concessions 1 and 2, across Lots 5 and 6, one mile. This road was cut and graded. A pile bridge was erected over Wicklow River on Lot 3.

Road between Lots 2 and 3, across Concessions 4, 5 and 6, three miles. This road was cut by the Colonization Branch in 1912 but not burned or ditched. This season the road was graded.

*Township of Brower:*

Road along the west boundary, across Concessions 5 and 6, two miles. This road was regraded this season, the forest fire of 1914 having burned out the corduroy.



Beautifully wooded shore of Coney Island in Lake Abitibi.



Road between Lots 10 and 11, across Concession 6, one mile. This road was cut and graded this season.

Road between Lots 6 and 7, across Concession 4, one mile. This road was cut and graded from Transcontinental Ry. south 50 chains this season, and cut and grubbed north of Transcontinental Ry. 30 chains.

Road between Lots 2 and 3, across Concessions 3 to 6, four miles. This road was regraded this season.

Road between Concessions 2 and 3, across Lots 1 and 2, one mile. This road was regraded this season.

Road between Concessions 3 and 4, across Lots 5 to 10, two miles. This road was cut last season (1913). This season the burning was completed and the road graded across Lots 6 to 9.

Road between Concessions 4 and 5, across Lots 9 to 12. This road was cut by the Colonization Branch in 1912; and this season  $1\frac{1}{2}$  miles was burned off, Lot 12 partly ditched and a pile bridge erected over Brule Creek on Lot 11.

Road on Concession 4, from Abitibi Station east to road between Lots 6 and 7,  $\frac{1}{2}$  mile. This road was cut, grubbed and burned off this season.

#### *Township of Fox:*

Road along the west boundary, across Concessions 1 and 2, two miles. This road was cut in 1912, and this season the road was graded and a bridge erected on Concession 2 across a small stream.

Road between Concessions 2 and 3, across Lot 12 to Transcontinental Ry.,  $\frac{1}{4}$  mile. This road was cut and graded this season.

#### *Township of Clergue:*

Road between the north and south half of Lot 10, Concession 6, from the side road between Lots 10 and 11 to Porquois Junction Station on the Temiskaming and Northern Ontario Ry.,  $\frac{1}{2}$  mile. This road was graded this season.

Road between Concessions 5 and 6, across part of Lot 9, Lots 10, 11 and 12,  $1\frac{3}{4}$  miles. This road was cut and partly grubbed and burned off this season.

Road between Lots 10 and 11, across Concession 6, one mile. This road was cut by the Colonization Branch in 1912. This season it was all burned and grubbed, and the north half graded.

Road along the east boundary, across Concessions 4, 5 and 6, three miles. This road was cut 1912-13 and this season the burning was completed.

Road along the east side of the Temiskaming and Northern Ontario Ry. from Monteith to Porquois Junction. This road was started last season (1913). This season the road was completed and three bridges constructed across small creeks.  $5\frac{3}{4}$  miles grading,  $2\frac{1}{4}$  miles cut out.

#### *Township of German:*

Road between Lots 10 and 11, across Concession 5 and part of Concession 6,  $1\frac{3}{4}$  miles. This road was cut, grubbed and burned off this season.

Road between Concessions 4 and 5, across Lots 11 and 12, one mile. This road was cut, grubbed and burned off this season.

Road along the west boundary, across Concessions 4 to 1,  $4\frac{1}{4}$  miles, to Night Hawk Lake. This road was cut, grubbed and burned off this season.



Guard at Interned Aliens' Camp, Kapuskasing.



Interned Aliens at Work Clearing Experimental Farm at Kapuskasing, 70 miles west of Cochrane.

*Townships of Shackleton and Fauquier:*

Road along the north limit of the Transcontinental Ry. from the Ground Hog River west to Moonbeam Station, seven miles. This road was cut last season. This year seven miles were burned off and ditched and graded from Ground Hog River west for 2½ miles.

Street in the Town of Cochrane, the approaches to the road around the south end of Commando Lake, ¼ mile. Grading and cutting down hills.

Ferry on the south boundary of the Township of Glackmeyer. A ferry was constructed over Abitibi River, 16 ft. x 28 ft., operated by a cable 400 feet long, capable of conveying passengers and teams.

Bridge, 200 feet long on the south boundary of the township of Clute, over the Frederickhouse River, was constructed on three piers filled with rock.

Road in the Townships of Whitney and Tisdale between the towns of Porcupine and Timmins. That portion of the old road built some years ago between Porcupine, Golden City on the Temiskaming and Northern Ontario Ry. and South Porcupine was surfaced with gravel and stone from the mines 2½ miles; 2½ miles between South Porcupine and Schumacher was regraded and surfaced with gravel and stone, and ¼ mile near Schumacher and the McIntyre Mine stoned. A bridge across a creek on Lot 5, Concession 2 and 3, Tisdale, was constructed.

Road in the Townships of Tisdale and Delora, from the Town of Timmins to the Hollinger Reserve Mine. This was an old road, and this season the bad spots were repaired, old crosslay replaced and in several places the road was shortened. This road is about three miles in length and has an average width of twenty-five feet.

A winter mining road from Earlton Branch of Temiskaming and Northern Ontario Ry. from the foot of Elk Lake, southerly to mires in the Maple Mountain District, having a length of twelve miles was cut out.

ROADS IN THE VICINITY OF THE TOWN OF HEARST, TRANSCONTINENTAL RY.

New roads cut out, not graded .....	15.75 miles
Roads graded, new and old .....	19.5 "
Roads burned and grubbed only .....	5.2 "

Road along the north side of the Transcontinental Ry., across the township of Kendall and part of the townships of Way and Hanlan. This road was cut last season. This year six miles in Kendall were graded and half-mile in Way; also 3½ miles additional burned and grubbed.

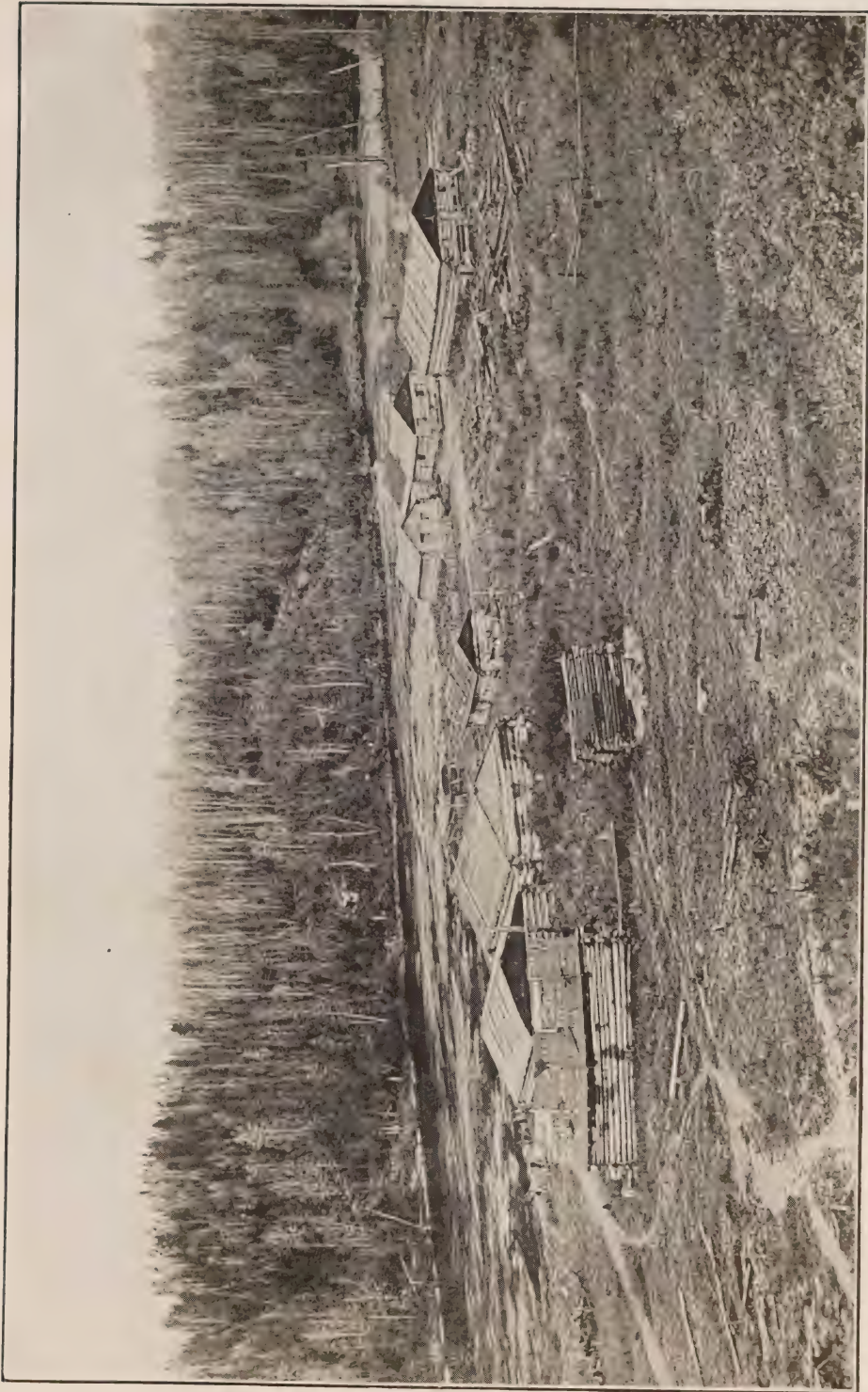
*Township of Casgrain:*

Road across the west boundary across part of Concession 1, .15 of mile of this road was graded.

Road between Lots 24 and 25, across Concessions 1 and 2, 1½ miles of this road was cut, grubbed, and burned off this season.

Road between Lots 18 and 19, across Concession 1, ¾ mile. This road was cut, grubbed and burned off this season.





The clay banks of the Nagagami River, Transcontinental Railway, 170 miles west of Cochrane, another of Northern Ontario's fine speckled trout streams, showing the Transcontinental Railway construction camps.

Road along the south boundary, across Lots 13 to 29. This road was cut last season. This year  $3\frac{1}{2}$  miles across Lots 14, 15, 16, 17, 18, 23, 24, 25, 26, 27 and 28 were graded and 1.7 miles burned.

Road between Concessions 2 and 3, across Lots 15 to 28,  $3\frac{1}{2}$  miles. This road was cut, grubbed, and burned off this season, with the exception of Lot 27.



Constructing bridge across Mattawishquia River near Hearst.



A view along the Kapuskasing River between Cochrane and Hearst on the Experimental Farm.

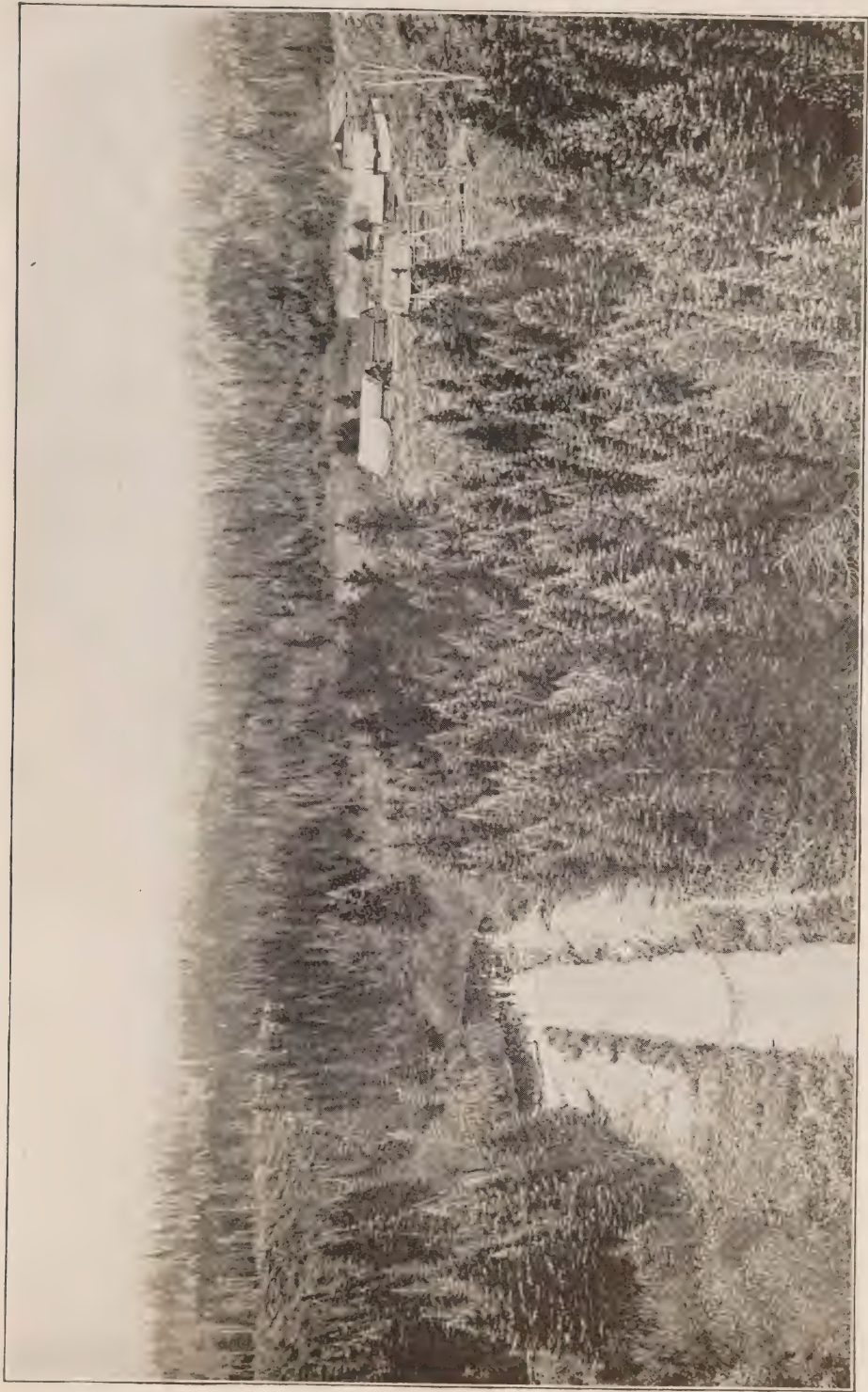
### *Township of Kendall.*

Road along the west boundary, across Concessions 9 to 12, three miles. This road was cut out last season and graded this season.

Road between Lots 24 and 25, across Concessions 11 and 12,  $1\frac{1}{2}$  miles. This road was graded this season.

Road between Lots 18 and 19, across parts of Concessions 10, 11, and 12, two miles. This road was cut, grubbed and burned off this season.





Skunk River, Transcontinental Railway, 168 miles west of Cochrane, showing the splendid clay lands in the valley, and one of Northern Ontario's fine speckled trout streams.



Road between Lots 12 and 13, across Concessions 7 to 10, 2.1 miles was graded this season. The road was cut out last season.

Road between Concessions 8 and 9, across Lots 13 to 29,  $5\frac{1}{4}$  miles. This road was cut, grubbed, and burned off this season.

Road between Concessions 10 and 11, two miles. Lots 19, 20, and 21 were cut and burned this season, and Lots 22, 23, and 24 were graded this season, the cutting having been done last season.

Road along the west and east banks of the Mattawishquia River from the Transcontinental Ry. north across part of Concessions 10, 11 and 12,  $2\frac{1}{4}$  miles. This road was cut and one half grubbed and burned off and half-mile graded this season.

A bridge across the Mattawishquia River, north of the Transcontinental Ry., was partly constructed, three rock-filled piers, abutments and stone approaches have been completed. The river is 100 feet wide. The bridge will be completed in March. The bridge, when completed, will give to the settlers east along the railway access to Hearst.

Streets in the Village of Hearst. Front and Ninth Streets were regraded  $1\frac{1}{4}$  miles. This was necessary owing to the destructive forest fire which swept over the town, burning out all culverts and corduroy laid last season.

A trunk sewer was constructed on 9th Street from Front Street south to the Mattawishquia River, a distance of 2,200 feet, also one along George and 10th Streets, 1,320 feet.

During the months of July and August two forest fires swept over the town of Hearst, destroying all the buildings in the town, except the Transcontinental Ry. station and round-house, a few small shacks, and one cottage. In one of the fires the office and store-house of the Northern Development Branch, constructed last season, including supplies and camp equipment valued at \$850 was destroyed. A small building has since been constructed to store supplies in.

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## EXPERIMENTAL FARMS AND GARDEN PLOTS.

At Groundhog River on the Transcontinental Railway, 50 miles west of the Town of Cochrane, an experimental garden was started. At this point the railway contractors have grown vegetables successfully for the last four or five years. The buildings occupied by the contractors were secured by this Branch and are now used as headquarters for work along the Transcontinental Railway between Cochrane and Hearst.

About the 1st of May, operations were started by cutting down and clearing off about 5 acres of land adjoining the small garden plot cleared by the railway contractors. The land was heavily timbered with spruce, balsam of gilead, poplar and white birch, and is situate along the west bank of the Groundhog River south of the railway rising gradually from the water's edge to a height of about 25 feet. The soil is a rich brown clay and clay loam, overlaid with about six inches of black loam. Plots of Spring wheat, barley oats, peas, potatoes and all kinds of vegetables were put in and ripened well giving a good production. Potatoes were planted at different periods from May 19th to July 1st. The Irish Cobbler planted 27th of May gave a yield of 192 bushels per acre; the Early Rose planted



Bridge over Wahtaybeg River, North of Matheson.

June 8th yielded 268 bushels per acre; the Delaware yielded 175 bushels per acre. The potatoes planted July 1st yielded 102 bushels per acre.

All vegetables such as radishes, carrots, garden peas, watermelons, parsnips and lettuce grew abundantly. The white and yellow Dutch onion setts yielded 242



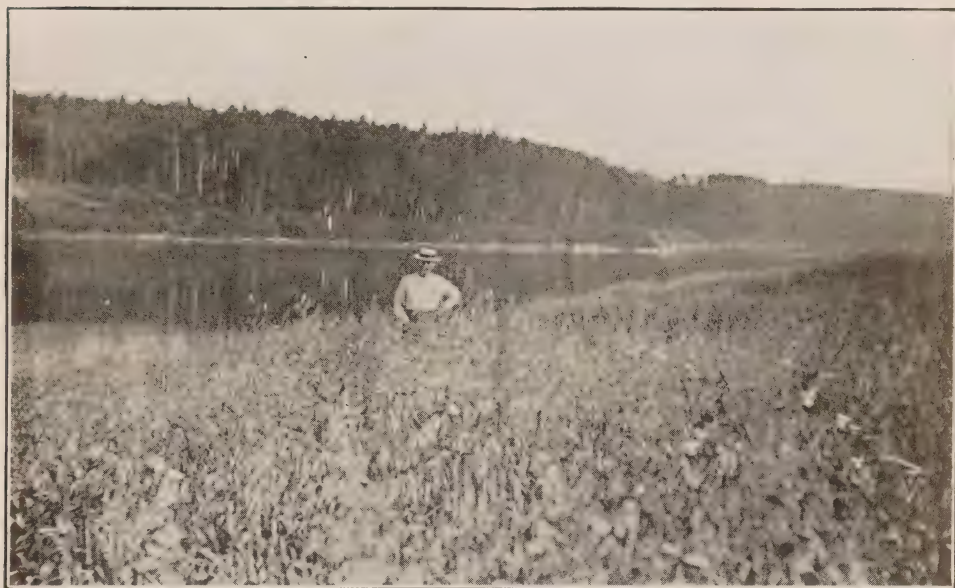
Field of Rye on the Northern Development  
Experimental Farm, Cochrane.



Onion Bed, experimental plot at Ground Hog.

bushels per acre, planted on the 29th of May. Strawberry plants, gooseberry, red raspberry and red currant bushes planted on the 27th of May gave every indication of being productive. Cabbages also grew abundantly, the larger ones having an average weight of 16 pounds, many of them weighing from 20 to 24 pounds, and





A view of the Northern Development Experimental farm plot on the Ground Hog River.



Headquarters of the Northern Development Branch, showing garden plot,  
Ground Hog River, T.C.R.

a few of them as high as 30 pounds. Wheat, peas, barley and oats ripened and gave a good yield.

Besides the garden plot near the Groundhog River a farm was located about 2 miles west of the river where the soil is a clay loam with about five inches of rich humus on the surface and the land gently rolling; the country was partially burned over several years ago and is now grown up with a second growth of poplar and spruce. The work on this farm was commenced about the 1st of May and 12 acres of spring crop sown. Seed planting was begun about the middle of May; 7 acres were plowed and put into Spring wheat, oats, barley, peas, rye, potatoes, turnips and other vegetables. In addition 5 acres were cleared, disced and harrowed and different varieties grown on this as a test. Spring wheat was sown on the 16th of May, and oats, barley, peas and rye sown at intervals during the balance of the month. Each variety ripened and gave a sufficient yield to en-



Headquarters of the Northern Development Branch at Ground Hog River, T. C. Ry., showing experimental garden.

courage settlement. Turnips, beets, carrots, parsnips and radishes gave a splendid yield and fully matured by September 2nd. On the low land, however, the potatoes were injured by summer frosts on or about the 1st of August.

On the garden plot on the bank of the river, beans and corn were injured by summer frosts before maturing, also tomatoes, watermelons and cucumbers.

Clover and timothy grew in great abundance both at the garden plot and farm. Rye grew to a height of over six feet.

During the months of August and September a further area of 14 acres was cleared and cultivated, and 4 acres of it sown in Fall wheat and 1 acre in Fall rye: this was sown on the 21st of August. The Fall wheat and rye got a good strong growth before the snow fell and had every appearance of being able to withstand the winter.



On the west farm there is now about 30 acres ready for spring crop. A small area of Fall wheat was also sown on the garden plot.

At the Town of Hearst at the junction of the Algoma Central Railway and the Transcontinental Railway, different kinds of grain and vegetables were planted and had every indication of a good yield. Unfortunately, however, a forest fire which swept over that section of the country, burning out almost the entire town, reached our garden and farm plots and completely destroyed the grain and vegetables.

On Lot 27, Concession 1, Township of Glackmeyer, about 1 mile west of the town of Cochrane, an experimental plot was rented where the land is comparatively level, the original forest growth being almost entirely spruce. The land had been burned over and partially cleared a year ago. Operations were commenced about



Another view of the Ground Hog experimental garden.

the middle of May and all kinds of grain and vegetables planted. Wheat, barley, peas, rye and oats were sown between the 14th of May and the 1st of July; they all matured and ripened before the middle of September. As the land was low lying and had from six inches to eight inches of vegetable mould on the surface, there was an abundant growth of straw. The grain was well filled and would compare favorably with crops grown in the best sections of older Ontario. Potatoes, onions, cabbages, beets, carrots, parsnips, radishes and turnips were also a first-class crop. Beans, corn and tomatoes were injured by the summer frosts about the 1st of August and did not mature. Beets, cabbages and onions were an exceptionally fine crop. This particular farm lot was selected to test the character of the soil on the low lying land in the district; the land before it was cleared had every appearance of a swamp; on the lot there was a small area of about a quarter of an acre of timothy and clover which yielded a splendid crop.



At the headquarters of the Northern Development Branch at the east end of the Town of Cochrane, all kinds of grain and vegetables were planted. The land is situate between two small lakes at an elevation of 20 feet above the water. To the south of the garden plot is a virgin forest of white birch, poplar, and spruce. The land is a clay loam well drained, but had not been cultivated heretofore. A splendid sample of Spring wheat was produced and exhibited at the Toronto Exhibition. All other kinds of grain matured about the end of the first week in September, except a late variety of peas. At this garden there was no sign of summer frosts until about the middle of September. Garden peas and beans ripened, and corn was a fair crop, fit for table use, but did not ripen. All classes of vegetables gave a good yield.

Throughout the district there were several summer frosts which injured vegetables, including potatoes, more particularly on the low lying lands or where



Cabbage, weighing 30 lbs, grown on Ground Hog experimental plot, T. C. R.

the land had not been properly cultivated; but as far as I could judge in visiting different parts of Northern Ontario, from the Rainy River Valley to the Ottawa River and along the north shore of Lake Huron, I find that the injury done by summer frosts in the Claybelt was no greater than that done in other sections; and from my observations, the crops were as good in the Claybelt as in most sections north of Parry Sound.

The soil is exceptionally suitable for the growth of timothy and clover. With proper cultivation, where large areas are cleared off, I am convinced that there will be no difficulty in growing all kinds of grain and vegetables. Where fall wheat was grown it matured; the crop was exceptionally good and in no instance did I find it had received injury from summer frosts.

J. F. WHITSON,

*Commissioner.*

NOVEMBER 18TH, 1914.

THE HONORABLE THE PREMIER.

SIR,—I beg to recommend the expenditure of the following amounts under 2 Geo. V. Chap 2, on the construction of new roads, repairing and finishing of old roads, the construction of bridges and the operation of the Experimental Farm at Ground Hog River, 52 miles west of the Town of Cochrane on the Transcontinental Railway, the Experimental Farms and gardens at Cochrane and Hearst.

*District of Rainy River.*

In the Rainy River Valley, to complete and re-surface roads constructed last season, also the opening up of new roads tributary to the trunk roads constructed last season ..... \$35,000

*District of Kenora.*

The construction of new roads in the agricultural section north-east and north-west of Dryden and in the valley of the Wabigoon River in the vicinity of the Grand Trunk Pacific Railway and along the Canadian Pacific Railway east of Kenora ..... 25,000

*District of Port Arthur.*

Re-surfacing trunk roads graded last season and the construction of short roads adjacent to the trunk roads, also construction of new roads, north of the Township of Dorion along the Canadian Pacific Railway .. 40,000

*District west and south of Fort William.*

The completion and extension of the trunk roads begun last season and re-surfacing and gravelling portions of the trunk roads partly constructed last season, including the Pigeon River or International Boundary and Duluth Road, also the completion of the bridge across the Kaministiquia River at Kakabeka Falls ..... 50,000

*Sudbury and Sault Ste. Marie Trunk Road.*

Improving and gravelling parts of trunk roads between Bruce Mines and Cuttler, partly under construction last season ..... 50,000

*District of Sudbury.*

Re-surfacing parts of trunk roads constructed last season in the Blezard and Chelmsford Valleys, construction of short roads through the Blezard Valley, the completion and extension of the West Shining Tree Mining Road and the repairing of Long Lake Mining Road, also construction of road from Coniston Village South to the Industrial Farm in the Township of Burwash ..... 40,000

*Sudbury and North Bay Road.*

The construction of a trunk road from the Town of Sturgeon Falls west to near the Town of Sudbury .....	50,000
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*District of Nipissing.*

The construction of trunk road through the Indian Reserve between the towns of North Bay and Sturgeon Falls, partly constructed in 1914. To cover one-half of cost .....	20,000
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The completion of the trunk road from the Village of Callander South to the Town of Powassan, also the completion of a trunk road from near Callander through the Township of Chisholm .....	15,000
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*Haileybury and South Lorrain.*

The completion of the trunk road through the mining and agricultural district south of Haileybury .....	8,000
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Mining road from Elk Lake Branch of the Temiskaming and Northern Ontario Railway to Maple Mountain Mining Section and other mining roads in the vicinity of Elk Lake .....	15,000
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The completion of the South Porcupine and Timmins mining road and other mining roads in the vicinity of Porcupine .....	12,000
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Colonization roads in the vicinity of Long Lake west and north of the Village of Charlton .....	20,000
---	--------

*Temiskaming and Northern Ontario Railway.*

Roads along the Temiskaming and Northern Ontario Railway from Earlton north to Cochrane and extending west as far as Charlton and Porcupine and east as far as the agricultural lands extend, including the construction of a bridge over the White River .....	90,000
---	--------

*Transcontinental Railway.*

Roads along the Transcontinental Railway from the Quebec boundary west to the Town of Hearst, to cover the completion of roads cut out last year, the construction of new roads where settlement has taken and is taking place, the completion of bridges across the Frederickhouse River near Cochrane and the Mattawishiquia River near Hearst .....	75,000
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The completion of the road from Pembroke to the Petawawa Military Camp .....	10,000
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The extension of the Mattawa-Pembroke trunk road east from Mattawa . . . . .	5,000
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For the operating of the experimental farms at Ground Hog River on the Transcontinental Railway, and at Cochrane and Hearst which were begun last year with a view to testing the climatic conditions of these sections of the country . . . . .	3,000
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Unforeseen work, exploration and surveys of new roads, renewing of old bridges and construction of new roads . . . . .	32,000
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Office and engineering expenses, equipment and plant . . . . .	20,000
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	\$615,000
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I have the honour to be, Sir,

Your obedient servant,

J. F. WHITSON,

*Commissioner.*



# REPORT

OF THE

## Minister of Lands, Forests and Mines

OF THE

### PROVINCE OF ONTARIO

For the Year Ending 31st October

# 1915

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PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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1916



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## CONTENTS.

### Appendices:

	PAGE
No. 1. Statement of Officers and Clerks in the Department .....	2
2.       "       Crown Lands Agents and Homestead Inspectors .....	5
3.       "       Lands Sold and Leased and Collections .....	7
4.       "       Gross Revenue .....	8
5.       "       Receipts Considered as Special Funds .....	9
6.       "       Gross Disbursements .....	10
7.       "       Expenditure on Account of Various Services .....	31
8.       "       Revenue from Woods and Forests .....	32
9.       "       Patents, etc., Issued .....	33
10.      "       Timber Cut and Amounts Accruing for Dues, etc. ....	34
11.      "       Work Done in Military Branch .....	36
12.      "       Letters Received and Mailed .....	36
13.      "       Locations, etc., under Free Grants Act .....	37
14.      "       Municipal Surveys Ordered .....	42
15.      "       Municipal Surveys Confirmed .....	44
16.      "       Crown Surveys in Progress .....	45
17.      "       Crown Surveys Completed .....	46
18. Surveyor's Report, Township Outlines, District of Algoma .....	47
19.       "       "       "       District of Thunder Bay .....	48
20.       "       "       "       Redvers, District of Kenora .....	51
21.       "       "       Township of Jaques, District of Thunder Bay.....	55
22.       "       "       "       Fraleigh, District of Thunder Bay .....	57
23. Supplementary List of Licensed Cullers .....	61
24. Report of Superintendent Algonquin Provincial Park .....	62
25.       "       "       Quetico Provincial Park .....	67
26. Report of the Forestry Branch .....	69





# Report of the Minister of Lands, Forests and Mines of the Province of Ontario

For the Year Ending 31st October, 1915

*To His Honour the Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit for the information of your Honour and the Legislative Assembly a report for the fiscal year ending 31st October, 1915, of the management of the Crown Lands of the Province.

It is with deep regret that I have to report the death of Aubrey White, C.M.G., (July 14th, 1915, age 70), late Deputy Minister for this Department.

Mr. White was actively engaged in the administration of the affairs of this Department for nearly thirty years. He was an able, valued and trusted public official, and his loss to the service is inestimable.

I also regret to report the death of Mr. E. S. Williamson, (October 30th, 1915, age 43), late secretary for the Department.

Mr. Williamson has been an official of this Department since 1889, and his services have been much appreciated.

## CLERGY LANDS.

The collection on account of Clergy Lands was \$99.20. No land was disposed of during the year. (See Appendix No. 3, page 7.)

## COMMON SCHOOL LANDS.

The area sold during the year was 20.30 acres. The collection on account of those and former sales was \$3,987.37. (See Appendix No. 3, page 7.)

## GRAMMAR SCHOOL LANDS.

There were no sales. The collection on account of former sales was \$1,003.29. (See Appendix No. 3, page 7.)

## UNIVERSITY LANDS.

The area of these lands sold during the year was 5,229.50 acres for \$2,614.75. The collection on account of these and former sales was \$1,360.57. (See Appendix No. 3, page 7.)

## CROWN LANDS.

There was sold during the year for agricultural and town site areas 146,307.19 acres for \$82,908.28. The collection on account of these and former sales was \$51,294.40. There was sold for mining purposes 17,277.85 acres for \$45,439.10. There was collected on account of these and former sales \$46,584.88.

There was leased for mining purposes 2,092.04 acres for \$2,092.04. There was collected on account of these leases and those of former years \$13,841.58. There was leased of Crown lands an area of 3,272.45 acres for \$1,209.21. There was collected on account of these and the leases of former years \$39,637.79.

The total area of Crown lands disposed of by sale and lease during the year was 174,199.33 acres for a value of \$134,433.38, as compared with 174,961 acres sold and leased in 1914 for \$156,704.41. The total collection on account of the sales, leases, etc., was \$157,809.08. (See Appendix No. 3, page 7.)

It will be observed that there has been an increase in the number of sales made this year. The net increase in the number of purchases is 179, representing some 2,637 people. Under existing conditions this is a very creditable showing, notwithstanding the large percentage of men who have enlisted for Active Service, that might have gone in to the North country.

The Transcontinental Railway and Canadian Northern Railway are now operating a tri-weekly service from Toronto to Winnipeg, thus greatly improving transportation facilities in the sections through which they pass.

#### FREE GRANTS.

For the year ending October 31st, 1915, there were 1,355 persons located for Free Grant land, and in addition 200 purchased portions of Free Grant territory; and 133 locatees were permitted to assign their interests to individuals who entered on the land. This aggregates a total of approximately 1,700 persons taking up land in Free Grant sections for an area of 208,000 acres.

While this number is less by 400 than the preceding year, it may be remarked that the difference is particularly noticeable in the Port Arthur Agency in Thunder Bay where there is a falling off of over 300; in the Stratton Agency in Rainy River of over 100, and in the Dryden Agency, Kenora, of 73. The falling off in these sections may be attributed in part to the open land being fairly well taken up, and also to the recruiting call, many would-be settlers no doubt having enlisted for service in the Empire's war.

There is a reduction of over 100 in number who purchased parcels in Free Grant territory.

Patents issued to 621 settlers who filed proof of completion of settlement duties.

The only new land opened during the year was part of the Township of Redvers, which has been attached to the Agency of Dryden.

#### MILITARY GRANTS.

The total number of military certificates issued to date, under the Veterans Land Grant Act, I Edward VII, Cap. 6, and amendments thereto, is 13,998.

During the year there have been 34 certificates located, making in all a total of 8,098 located.

There were 8 certificates surrendered to the Crown for the \$50.00 commutation, this makes a total of 3,242 certificates surrendered.

In 21 cases the certificates have been surrendered and applied in payment of lands purchased from the Crown, making a total of 742 that have been applied in this manner.

During the year there have been 192 patents issued for lands located by veterans, making a total of 6,932 thus disposed of.

The total number therefore of certificates that have now been redeemed is 12,145, leaving 1,853 still outstanding.

The locatees of all lands granted under this Act, must apply for their patents for such land before ten years have expired from date of location. If this application for patent is not made within the ten years, then the land comes under the settlement regulations, and unless the settlement duties are proceeded with, the locations are liable to cancellation.

### THE MINING INDUSTRY.

Returns made to the Ontario Bureau of Mines show that the production of the metalliferous mines and works of the Province for the nine months ending 30th September, 1915, was as follows: The table also shows the changes as compared with the same period of 1914.

	Value.	Increase or Decrease.
Gold . . . . .	\$5,826,941	I. \$1,884,093
Silver . . . . .	8,030,469	D. 2,051,760
Copper . . . . .	2,024,658	I. 359,762
Nickel . . . . .	5,369,536	I. 1,345,980
Iron ore . . . . .	601,044	I. 221,126
Pig iron . . . . .	4,510,906	D. 1,933,307
Cobalt ore . . . . .	12,472	D. 14,091
Cobalt metal . . . . .	66,552	I. 66,552
Nickel metal . . . . .	4,762	I. 4,762
Cobalt and Nickel oxides, etc. . . . .	124,088	D. 331,403

### NOTES.

#### *Precious Metals:*

The increase in the production of gold amounts to one-third. The gold districts of Northern Ontario are fulfilling the prediction made several years ago, that they would make good the loss caused by the waning of the silver mines of Cobalt. Thus the combined value of the gold and silver output of the first nine months of the present year was only \$167,661 less than for the same period of 1914, notwithstanding the fact that the yield of silver fell off over 20 per cent. Part of this decrease is due to the low prices which prevailed during the whole nine months, but which made a sharp and decided recovery in November. In gold the Porcupine mines make an excellent showing, practically every mine on the list having increased its output. Hollinger continues to lead, being now coupled up with Acme, whose ore is crushed under the same roof. The new producers are Dome Lake in the Porcupine camp, and Dominion Reduction Company, from the latter's spectacular free gold property in Munro township.

Nipissing heads the list of silver mines at Cobalt, with Mining Corporation of Canada, Coniagas, Kerr Lake, Seneca Superior and Temiskaming following in the order named. Silver to the extent of 50,527 ounces, was recovered from the bullion of the gold mines.

*Nickel and Copper.*—The Sudbury mines are being worked to the maximum capacity, and the production of nickel for the nine months nearly equals the largest previous output for a full year. Over 75 per cent. of the output is made by the Canadian Copper Company, but the operations of the Mond Company are now more extensive than formerly, and its output has correspondingly increased.

The yield of copper was also much greater than in the corresponding period of 1914, and nearly equalled the total output of that year. It was all contained in the Sudbury mattes, which are sent to Bayonne, N.J., and Clydach, Wales, for final treatment.



*Iron.*—The shipments of ore show an increase, the output coming from Magpie, Helen and Moose Mountain. Stock piles were drawn upon at the two latter, and a limited quantity of briquettes were marketed by Moose Mountain. The output of pig iron suffered a decrease of 28 per cent. in quantity and a slight lowering in the average selling price per ton.

*Silver By-products.*—Metallic nickel and cobalt are now produced from the silver ores of Cobalt by the smelters at Deloro and Thorold. Of the former 98,216 pounds and of the latter 24,962 pounds were made and shipped during the nine months. The trade in cobalt and nickel oxides has been heavily affected by the war, and the quantities shipped were much below those of the corresponding period of 1914.

*Molybdenite.*—Efforts are being made to produce molybdenite, which is in demand in England for the manufacture of steel for ordnance-working tools. The British Government has requisitioned all supplies of this mineral arriving in Britain at the rate of 105 shillings per unit delivered, on the basis of 90 per cent. concentrates. Molybdenite occurs in pockets in many parts of eastern Ontario, and there should not be much difficulty in obtaining a considerable supply to help meet the needs of the English steel-makers.

#### COLLECTIONS.

The total revenue of the Department from all sources was \$2,021,989.14. Of this \$51,284.40 came from agricultural lands and town sites; mining lands \$46,584.88; mining and crown leases \$53,479.37; miners' licenses, permits and recording fees \$52,308.70; royalties \$52,860.60; supplementary revenue tax \$440,079.91. From woods and forests the revenue was \$1,528,104.82 made up of the following items, bonus \$507,241.43; timber dues \$928,351.38; ground rent \$89,952.01; transfer fees \$2,560.00. (See Appendix No. 4, page 8.)

#### DISBURSEMENTS.

The total expenditure of the Department for ordinary services was \$484,482.00. Some of the principal items were: Agents' salaries and disbursements \$16,855.71; homestead inspectors \$12,854.58; Crown timber agents \$29,892.74; wood ranging and estimation of timber \$146,480.84; fire ranging <sup>67,731.63</sup> \$257,731.63; forest reserves, fire ranging, etc., Temagami reserve \$31,740.34, Metagami reserve \$7,148.78; Mississauga reserve \$15,768.57; Nipigon reserve \$9,383.24; Eastern reserve \$2,482.66; Sibley reserve \$790.00; mines and mining \$47,066.01; mining recorders \$21,259.94; surveys \$26,999.35; refunds \$14,697.63; contingencies, lands and forests \$24,480.05; bureau of mines \$8,942.20.

A further sum of \$82,640.62 was expended under the direction of the Department, distributed as follows: Algonquin Park \$35,384.38; Quetico Provincial Park \$13,443.88; expenditure under Bounty Act, 7 Edward VII, cap. 14, \$31,025.62; Veteran's Commutation \$400.00; Royal Nickel Commission \$2,387.33. (See Appendices Nos. 6 and 7, pages 10 and 31.)

#### WOODS AND FORESTS.

The revenue accrued from woods and forests for the year ending 31st October, 1915, was \$1,629,640.60, a decrease of \$379,481.83. The falling off is due almost entirely to decrease in number of railway ties taken out, 729,164 being taken out last season as against 5,439,845 the previous season.

The revenue collected during the year from woods and forests amounted to \$1,528,104.82, a decrease of \$146,783.11.

The revenue from timber dues was \$928,351.38, a decrease of \$184,129.00 as compared with last year.

The collections on account of bonus amounted to \$507,241.43, an increase of \$53,074.19 over that of the preceding year.

The collections from ground rentals amounted to \$89,952.01 which is \$13,958.30 less than amount collected from same source for the year ending October 31st, 1914.

The revenue from transfer fees was \$2,560.00 as against \$4,330.00 for preceding year.

The area under license last year was 15,711 $\frac{3}{4}$  square miles, a reduction in area of 1,621 $\frac{1}{4}$  square miles. The area under license varies from year to year for the following reasons: Areas cut over are dropped from the license; license does not issue on account of non-payment of ground rent; failure on the part of licensees to pay timber dues owing.

There was surrendered during the year 602 $\frac{1}{4}$  square miles. New licenses were issued for territory covering 312 square miles.

#### VOLUME OF OUTPUT.

The production of pine timber, saw logs, square timber, etc., last year was 407,874,044 feet board measure, an increase of 25,292,017 feet board measure over quantity produced last year. The output of timber other than pine, was 59,308,403 feet board measure as against 77,451,857 feet board measure last year.

The quantity of pulpwood taken off Crown Lands was 301,061 cords as compared with 104,544 cords last year. The number of railway ties taken out last year was 729,164 as against 5,439,845 the previous year.

#### FINANCIAL CONDITIONS.

The collections from woods and forests, while falling below that of last year, has exceeded the estimated revenue by \$28,104.82, showing that the financial stringency existing in 1914 has not to the same extent forced the lumbermen to postpone their payments.

Lumbering operations have fallen off greatly throughout the Province, and the cessation of railway construction is responsible for the greater portion of the decrease in collections this year.

The export trade is practically at a standstill, and the domestic trade, depending largely upon building construction, has not shown much improvement; consequently prices are low and such conditions do not encourage lumbering or manufacture.

#### TRADE OUTLOOK.

Lumbermen throughout the Province refer to 1915 as the stiffest year they have ever experienced. Nevertheless an optimistic view appears to prevail. From the present outlook it would appear that the output for 1916 will show a substantial increase over that of the present season. It is almost inevitable that at the termination of the war there must be a vastly increased demand for Ontario lumber, both in domestic and export markets.

## SALES.

No large sales of timber have been made this year. Several small berths have been disposed of, for the most part being burnt over or containing fallen timber.

## FIRE-RANGING.

We had on duty last season on Crown Lands, railways and in the forest reserves 442 men distributed as follows: on forest reserves 166; on railways 126; Crown Lands 107. There were 18 chief rangers and 5 deputy chief rangers, 12 inspectors on railways and 8 supervisors on lands under license.

The railway inspectors were appointed by the Department to see that the regulations of the Dominion Railway Board with respect to fire protection were carried out. On the T. & N. O. Railway and the Grand Trunk Pacific Railway the Department had the usual staff of rangers under competent chiefs.

On lands under license there were 286 rangers on duty. These rangers are selected by the licensees, subject to the approval of the Department, which has the power to remove after appointment if the person recommended is not of good character or neglects his duties. These rangers are recommended by the licensees because of their knowledge of the topography of the limits, the location of settlers and general familiarity with points requiring closest supervision. The licensees have to pay the rangers patrolling, and all expenses in connection with fire fighting on their limits.

The territory under license has been divided into districts, over each of which a supervising ranger is placed by the Department, whose duty it is to see that the rangers nominated by the licensees are active in the discharge of their duties and that all limits are properly protected. Should he find any limit unprotected or insufficiently protected, the Department upon receipt of such report may appoint such rangers as it deems necessary for the protection of timber, and the remuneration and other expenses are charged against the limit and license withheld until amount is paid.

The wages of the supervising rangers, eight in number, are paid by the Department in the first place, but are later collected from the licensees *pro rata*.

## FOREST RESERVES.

Temagami forest reserve has been divided for fire-ranging purposes into five divisions, over which four chief rangers and one deputy chief have supervision. There was a staff of 101 rangers in this reserve last season.

Two fires occurred damaging about 1,000,000 feet board measure of red and white pine and some 4,000 railway ties.

Mississauga Forest Reserve had a staff of 40 rangers under one chief ranger and three deputy chief rangers. There were no fires in this reserve during the season of 1915.

In the Nepigon forest reserve there were 17 rangers under one chief ranger. There were several fires during the season, but they were controlled before any damage was done to merchantable timber.

The Eastern forest reserve and Sibley forest reserve had the usual staffs of rangers and were free from fire.

The expenditure for extra assistance in connection with the forest fires for all five reserves amounted to only \$243.10.

The total cost of the patrol of forest reserves was \$67,313.59.



## RAILWAYS.

Regular staffs of rangers have been on duty on the Transcontinental and T. & N. O. Railways. The Canadian Northern Railway, under the direction of the Dominion Railway Board, became responsible for the fire ranging on their line, inspectors being appointed by the Department to see that the regulations of the Board were observed. On the Transcontinental there were 61 rangers on duty under three superintendents; on the T. & N. O. Railway 68 rangers with three chief rangers.

The cost of patrol of railways was \$56,326.00.

The year 1915 was unusually favorable except for the first two months of the fire-ranging season, when the growth of vegetation was retarded by low temperatures so that fires once started spread rapidly and were difficult to control. During the balance of the season the precipitation was generous and frequent, there being no prolonged dry spell.

The number of fires reported on Crown Lands, railways and forest reserves was 430, of which 372 did no damage to merchantable timber. Of the total number of fires 317 were reported by rangers patrolling the railways, 52 by reserve rangers and 61 by those on other Crown Lands.

Of the causes of fires 57 per cent. were attributed to railway engines and railways; 11 per cent. to settlers; 12 per cent. to causes not ascertained and the remaining 20 per cent. to Indians, prospectors, berry pickers, campers, etc.

In the Port Arthur District there were several fires caused by settlers clearing land. About 200 acres of small timber was damaged, 13 settlers losing their effects as a result of these fires.

The only other fires on Crown Lands that did damage were in the Sturgeon River District, where considerable quantity of pine was injured by fire.

The cost of fire-ranging on Crown Lands was \$54,924.79.

On licensed lands 56 fires were reported, 37 doing no damage. Settlers were held responsible for 14 per cent.; railways 16 per cent.; 25 per cent. were ascribed to fishermen and campers; 33 per cent. to causes unknown; the remainder to squatters, river drivers, lightning and careless smokers.

Fires doing considerable damage occurred in the Townships of McKenzie, Grassett, Ermatinger, Notman and McWilliams and Blyth. The licensees have undertaken to have damaged timber taken out.

The cost of fire-ranging on licensed lands was approximately \$70,000.00.

## CULLERS' EXAMINATIONS.

Only one Cullers' examination was held during the past year, viz., at North Bay. Only four candidates succeeded in passing the examination and these were duly granted certificates authorizing them to act as cullers.

(For a list of cullers who passed at this examination see Appendix 23, page 61.)

(For a complete list of licensed cullers see Minister's reports for 1911, 1912, 1913 and 1914.)

## CROWN SURVEYS.

The following Crown Surveys have been concluded this year:

Subdivision of part of the Township of Fraleigh, District of Thunder Bay.

Township of Jacques, District of Thunder Bay.

Township of Redvers, District of Kenora.

Township of Upsala, District of Thunder Bay.

Township of McMillan, District of Algoma.

Survey of a line in the Township of Beaumont, District of Sudbury.

#### INSTRUCTIONS WERE GIVEN FOR THE FOLLOWING SURVEYS.

Townships of Owens, District of Timiskaming.

Outlines of certain townships, District of Algoma.

Survey of a tie line in the vicinity of Kowkash, District of Thunder Bay.

Survey of islands in the Georgian Bay, District of Algoma and Manitoulin.

Survey of a portion of land in the vicinity of Ramsay Station, District of Sudbury.

Survey of certain outlines of townships, District of Algoma.

Survey of islands on the north shore of Lake Huron and Georgian Bay, Districts of Manitoulin, Sudbury and Parry Sound.

Subdivision of the Township of Forbes, District of Thunder Bay.

Survey of islands in Lake Huron, east and north-east of Manitoulin Island, District of Manitoulin.

Survey of certain lands north of the Townships of Ware, Gorham and MacGregor, District of Thunder Bay.

Subdivision of the Township of Colenso, District of Kenora.

Reports of the surveys so far as received and examined will be found in appendices 16 to 22 inclusive, pages 45 to 61.

#### MUNICIPAL SURVEYS.

On the petition of the Municipal Council of the City of Port Arthur, instructions were issued to survey a portion of the city of Port Arthur in the District of Thunder Bay, between John Street and McVicar and River Streets, and between Algoma and High Streets, being the balance of what was known as the old town plot of Prince Arthur's Landing, and to have the corners of all the streets marked by iron bars, duly planted thereat.

Also on the petition of the Municipal Council of the united Townships of Wilberforce and North Algona, instructions were issued to survey part of the boundary line dividing the Townships of Wilberforce and Stafford, commencing at the 20th concession of Wilberforce and ending at the town line of Alice, and to plant stone or other durable monuments at the front and rear angles of the concession roads above mentioned in the Township of Wilberforce.

Also on the petition of the Municipal Council of the Corporation of the Township of Harwich, instructions were issued to survey the concession line between Concessions II and III in the Township of Harwich, from Lot No. 3 to the waters of the Rond Eau and to plant stone or iron monuments on each side thereof.

Also on the petition of the Municipal Council of the Corporation of the Township of Fenelon, instructions were issued to survey the road allowance between Concessions VIII and IX in the Township of Fenelon, across broken Lot No. 11, or as much farther on either side as may be required to find an original monument and to plant stone or other durable monuments at the angles of the lots.

Also on the petition of the Municipal Council of the City of Hamilton, instructions were issued to survey the limits of Mountain Park Avenue, in the City

of Hamilton, from the west side of Wentworth Street to Lakeview Avenue, and of Wentworth Street from the allowance for road between the 3rd and 4th Concessions of the Township of Barton and the brow of the mountain now in the City of Hamilton, and to plant durable monuments showing the northerly and southerly boundaries of Mountain Park Avenue between Wentworth Street and Lakeview Avenue, and the easterly and westerly boundaries of Wentworth Street between the allowance for road between the 3rd and 4th Concessions of the Township of Barton and the brow of the Mountain.

Also on the petition of the Municipal Council of the Township of Zone, instructions were issued to survey the line in the Township of Zone from between the 3rd and 4th Concessions across Concessions 4, 5 and 6 to the Longwoods Road, and to mark the said line by permanent monuments.

Also on the petition of the Municipal Council of the Township of Goulburn, instructions were issued to survey the 6th Concession Line from Lot No. 25 at the side road to Lot No. 18 in the Township of Goulburn, and to have durable monuments planted at the corners of the above lots.

Also on the petition of the Municipal Council of the Township of Westmeath, instructions were issued to survey the concession line between Concessions 8 and 9, opposite Lots numbers 1, 2 and 3, in the Township of Westmeath, in the County of Renfrew, or as much farther as may be necessary on either side, and to mark the same by permanent stone or other durable material.

Also on the petition of the Municipal Council of the Township of Kenyon, instructions were issued to survey part of the concession road allowance between the 6th and 7th Concessions of the Township of Kenyon, from the east side of Lot No. 7 to the west side of Lot No. 12, and also of the road allowance between Lots numbers 6 and 7 in the 6th Concession, and to plant durable monuments to define said road allowances opposite the above lots.

Also on the petition of the Municipal Council of the Township of North Grimsby, instructions were issued to survey the road allowance between the broken front and the first concession of the Township of North Grimsby, from the easterly limit of the said Township of North Grimsby to the allowance for road between Lots numbers 6 and 7 in the first and broken front concessions, and that durable monuments be planted defining the limits of the 66 foot reservation for a highway between the said broken front and the first Concession of the Township of North Grimsby from the easterly limit of the said Township to the allowance for road between Lots numbers 6 and 7 in the first and broken front concessions.

The following Municipal Surveys have been confirmed under the provisions of the Revised Statutes of Ontario, 1914, Chapter 166, Sections 13 and 11, such surveys being final and conclusive.

Survey of certain streets in the City of Port Arthur in the District of Thunder Bay, including North and South Water Streets, Cumberland Street, Court Street and Algoma Street and all intersecting streets between John Street and McVicar Street.

Also the survey of the road allowance between the 3rd and 4th Concessions south of the base line in the Township of Wolfe Island in the County of Frontenac, across Lots 8, 9 and 10.

Also the survey of part of the town plot of Port Credit in the County of Peel, lying south-west of the River Credit and north-east of Joseph Street in the said village.



Also the survey of the road allowance between Concessions two and three in the Township of Ross, from the proof line between Lots ten and eleven south-easterly to Olmsted Lake.

Also the survey of the road allowance between Concessions VIII and IX in the Township of Fenelon, across broken Lot No. 11.

Particulars relating to these surveys will be found in appendices 14 and 15, pages 42 and 44.

G. H. FERGUSON,  
Minister.

Department of Lands, Forests and Mines,  
Toronto, October 30th, 1915.

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# APPENDICES

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## Appendix No. 1.

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1915.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
	Hon. G. H. Ferguson	Minister	1914, Dec. 22	\$ 6,000 00	
	Aubrey White	Deputy Minister	1882, Jan. 1	4,400 00	Died July 14, 1915.
	Albert Grigg	Deputy Minister	1915, Oct. 18	3,600 00	
	Geo. Kennedy	Law Clerk	1872, Feb. 1	2,900 00	
	C. C. Hele	Minister's Secretary	1912, Jan. 23	1,800 00	
	E. S. Williamson	Secretary to Department	1889, May 1	1,950 00	Died Oct. 30, 1915.
	Janet Garvie	Clerk	1905, Jan. 1	825 00	Resigned Jan. 30, 1915.
	A. G. Thompson	do	1909, Mar. 24	825 00	
	J. Farrington	Stenographer	1910, Dec. 14	800 00	Resigned Jan. 31, 1915.
	J. J. Murphy	Chief Clerk	1872 May 1	2,300 00	
	W. C. Cain	Clerk of Free Grants	1903, Mar. 6	1,750 00	
	W. R. Ledger	Clerk	1894, Feb. 5	1,450 00	
	Selby Draper	do	1903, Jan. 1	1,350 00	
	S. A. Platt	do	1907, Mar. 13	1,100 00	
	F. Lucas	do	1909, Mar. 24	1,100 00	
	F. Samuels	do	1909, Mar. 24	925 00	
	W. B. Baines	do	1912, Oct. 5	950 00	
	A. G. Hall	do	1915, May 4	650 00	
	May Bengough	do	1896, Oct. 23	750 00	
	Jean C. Oram	Stenographer	1907, Jan. 16	725 00	
	Nan MacQueen	do	1909, Mar. 24	725 00	
	H. E. Johnston	Chief Clerk	1907, Mar. 13	1,600 00	
	E. F. O'Neil	Stenographer	1904, Nov. 9	725 00	
	G. B. Kirkpatrick	Director of Surveys	1866, Jan. 30	2,700 00	
	L. V. Rorke	Surveyor and Draughtsman.	1909, May 1	2,600 00	
	Jas. Hutcheon	Asst. Surveyor and Draughtsman	1913, May 20	2,150 00	
	W. F. Lewis	Clerk	1872, May 5	1,400 00	
	D. G. Boyd	Draughtsman	1897, Sept. 27	1,650 00	
	E. M. Jarvis	Clerk	1904, Oct. 19	1,400 00	
	J. B. Proctor	do	1897, Jan. 15	1,200 00	
	H. Treeby	Draughtsman	1904, Jan. 13	1,250 00	
Sales and Free Grants.....					
Military Grants.					
Surveys.....					



John Work	do	.....	1911, Mar. 3	1,250 00
	F. E. Blanchet	.....	1907, Mar. 13	1,100 00
	A. Leaman	.....	1909, Mar. 24	1,100 00
	B. Rushford	.....	1912, Oct. 5	1,000 00
	H. M. Kirkland	.....	1904, Nov. 23	725 00
	E. G. Halliday	.....	1909, Mar. 24	725 00
	E. C. Armer	.....	1911, Mar. 3	625 00
	B. Benson	.....	1911, Mar. 3	625 00
	C. O'Connor	.....	1911, Mar. 3	625 00
	Stenographer	.....		
Patents	do	.....		
	Chief Clerk	.....		
	Clerk	.....		
	C. S. Jones	.....	1890, May 22	2,050 00
	C. E. Burns	.....	1900, Apr. 9	1,450 00
	W. S. Sutherland	.....	1902, Apr. 13	1,350 00
	W. Carrell	.....	1904, Jan. 15	1,250 00
	A. E. Robillard	.....	1894, May 8	1,000 00
	A. E. Roe	.....	1909, Mar. 24	1,250 00
	do	.....		
Woods and Forests	Chief Clerk	.....		
	Clerk	.....		
	J. A. G. Crozier	.....	1867, Dec. 1	2,300 00
	J. B. Cook	.....	1898, Aug. 1	1,750 00
	H. Gillard	.....	1900, Apr. 9	1,500 00
	F. J. Niven	.....	1903, Mar. 6	1,350 00
	W. F. Trivett	.....	1904, Jan. 13	1,300 00
	R. H. Hodgson	.....	1904, Nov. 23	1,200 00
	J. Houser	.....	1907, Mar. 13	1,400 00
	A. H. O'Neil	.....	1909, Mar. 24	1,000 00
Accounts	G. W. Harris	.....	1909, Mar. 24	1,000 00
	N. L. Rogers	.....	1911, Nov. 1	950 00
	S. D. Meeking	.....	1910, June 1	900 00
	A. P. Saunders	.....	1913, Apr. 30	850 00
	M. E. Bliss	.....	1909, Sept. 1	775 00
	C. Rowland	.....	1915, Mar. 23	700 00
	W. A. Fleming	.....	1915, Mar. 1	600 00
	Stenographer	.....		
	do	.....		
	do	.....		
Accounts	Accountant	.....		
	Clerk	.....		
	D. G. Ross	.....	1861, Apr. 15	2,550 00
	H. M. Lount	.....	1904, Jan. 13	1,550 00
	C. J. Clarke	.....	1907, Mar. 13	1,150 00
	R. Gordon	.....	1913, Apr. 30	850 00
	C. Bowland	.....	1911, Mar. 3	700 00
	F. Yeigh	.....	1880, Mar. 1	1,600 00
	C. Dies	.....	1907, Mar. 13	1,250 00
	Clerk	.....		

Appendix No. 1.—*Concluded.*

Return of Officers and Clerks of the Department of Lands, Forests and Mines for the year ending October 31st, 1915.

Branch.	Name.	Designation.	When appointed.	Salary per annum.	Remarks.
Forestry.....	E. J. Zavitz .....	Director .....	1912, Nov. 7 .....	\$ 2,600 00	
	F. S. Newman .....	Assistant Director .....	1913, Sept. 22 .....	1,600 00	
	J. J. Bald .....	Stenographer .....	1914, Oct. 28 .....	600 00	
Bureau of Mines.....	T. W. Gibson .....	Deputy Minister .....	1891, June 19 .....	4,000 00	
	R. D. Fisher .....	Secretary .....	1907, Mar. 13 .....	1,350 00	
	W. Lemoine .....	Clerk .....	1908, Apr. 8 .....	1,150 00	
	D. H. Barr .....	do .....	1907, Mar. 13 .....	1,150 00	
	W. A. Burritt .....	do .....	1908, Apr. 8 .....	1,150 00	
	Anne Moffatt .....	do .....	1901, Mar. 1 .....	1,100 00	
	A. G. Scovell .....	do .....	1909, Mar. 24 .....	1,050 00	
	C. W. St. John .....	do .....	1910, Apr. 14 .....	1,000 00	
	F. L. Godson .....	do .....	1915, June 18 .....	900 00	
	Ethel Craig .....	Clerk and Stenographer .....	1906, May 16 .....	800 00	
	F. McDougall .....	do .....	1907, Mar. 13 .....	725 00	
	J. L. McNaughton .....	Stenographer .....	1909, Mar. 24 .....	750 00	
	H. W. Batchelor .....	do .....	1911, Dec. 19 .....	650 00	
	H. Brophy .....	Messenger .....	1898, Oct. 1 .....	925 00	

D GEO. ROSS,  
Accountant.ALBERT GRIGG,  
Deputy Minister of Lands and Forests.

## Appendix No. 2.

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1914.

Name.	Post office address	District or County.	Date of appointment.	Salary per annum.	Remarks.
Anderson, T. V. . . . .	Hearst . . . . .	Part District of Algoma . . . . .	1913, May 9	\$ 500 00	Resigned April 21, 1915.
Arthurs, E. . . . .	Espanola Mills. . . . .	do do . . . . .	1915, May 7	200 00	
Baker, R. H. . . . .	Minden . . . . .	Part of Victoria . . . . .	1907, Oct. 1	350 00	
Bar, J. . . . .	Fort Frances . . . . .	Homestead Inspector . . . . .	1906, Nov. 23	1,200 00	
Bastien, J. A. . . . .	Chelmsford . . . . .	do do . . . . .	1913, May 2	600 00	
Bolger, J. W. . . . .	New Liskeard . . . . .	Lake Temiskaming, District of Nipissing . . . . .	1913, July 17	700 00	
Both, C. . . . .	Denbigh . . . . .	Part of Frontenac and Addington . . . . .	1905, Oct. 20	200 00	
Brown, J. B. . . . .	Bracebridge . . . . .	Homestead Inspector and Crown Land Agt. . . . .	1905, July 28	1,000 00	
Byers, R. J. . . . .	Massey . . . . .	Part District of Sudbury . . . . .	1906, July 3	500 00	
Buchanan, T. . . . .	Thessalon . . . . .	do do Algoma . . . . .	1901, Nov. 30	300 00	
Burrows, W. A. . . . .	Port Arthur . . . . .	do do Thunder Bay . . . . .	1912, Jan. 30	700 00	
Burnes, C. W. . . . .	Sundridge . . . . .	Homestead Inspector . . . . .	1905, Nov. 15	900 00	
Cameron, W. . . . .	Stratton Station . . . . .	Part District of Rainy River . . . . .	1911, April 27	500 00	
Campbell, I. M. . . . .	Parry Sound . . . . .	do do Parry Sound . . . . .	1914, Nov. 12	500 00	
Cragg, W. V. . . . .	New Liskeard . . . . .	Homestead Inspector . . . . .	1913, Mar. 27	1,200 00	
Dean, T. . . . .	Sault Ste. Marie . . . . .	do do . . . . .	1903, July 29	600 00	
Dempsey, S. J. . . . .	Cochrane . . . . .	Part District of Nipissing . . . . .	1911, Feb. 9	600 00	
Dodds, T. . . . .	Thessalon . . . . .	do do Algoma . . . . .	1915, May 4	300 00	
Douglas, W. J. . . . .	Greenvew . . . . .	do Hastings . . . . .	1912, June 12	500 00	
Ellis, H. J. . . . .	Powassan . . . . .	do District of Parry Sound . . . . .	1909, May 21	500 00	
Freeborn, Dr. J. S. . . . .	Magnetawan . . . . .	do do . . . . .	1905, Nov. 10	500 00	
Gibson, J. E. . . . .	Dryden . . . . .	District of Rainy River . . . . .	1914, Nov. 20	500 00	
Ginn, F. E. . . . .	Matheron . . . . .	Part District of Nipissing . . . . .	1912, Mar. 20	500 00	
Hales, W. . . . .	Apsley . . . . .	do County of Peterboro . . . . .	1911, July 20	250 00	
Hayes, G. . . . .	Dryden . . . . .	District of Rainy River . . . . .	1914, June 1	500 00	
Hollands, C. J. . . . .	Fort Frances . . . . .	Part Township of Alberta and part District of Rainy River . . . . .	1892, Oct. 12	300 00	
Hughes, T. . . . .	Murillo . . . . .	Homestead Inspector . . . . .	1908, July 20	800 00	
Jenkin, W. . . . .	Emisdale . . . . .	Part of District of Parry Sound . . . . .	1908, July 29	500 00	
Langlois, E. . . . .	Warren . . . . .	do do . . . . .	1911, April 4	500 00	
Lemieux, J. A. . . . .	Bleard Valley . . . . .	do do Sudbury . . . . .	1908, June 26	400 00	
					Resigned Nov. 6, 1914.



## Appendix No. 2.—Concluded.

List of Land Agents and Homestead Inspectors for the year ending October 31st, 1914.—Concluded.

Name.	Post office address	District or county.	Date of appointment.	Salary per annum.	Remarks.
MacLennan, J. K.	Sudbury	Part of District of Sudbury	1905, July 8	\$ 500 00	
McFayden, A.	Emo	do do Rainy River	1906, Sept. 8	500 00	
Noble, E.	Sault Ste. Marie.	do do Algoma	1913, Feb. 1	300 00	
Parsons, W. J.	North Bay	do do Nipissing	1908, April 8	500 00	
Philion, J. A.	Sturgeon Falls.	do do do	1907, Sept. 13	500 00	
Prince, A.	Wilno	do of Renfrew	1905, July 12	500 00	
Quenneville, I.	Sturgeon Falls.	Homestead Inspector	1906, May 7	600 00	
Small, R.	Mattawa	Part District of Nipissing	1910, June 30	500 00	
Smith, D.	Cochrane	Homestead Inspector	1912, April 16	1,000 00	
Spry, W. L.	Kenora	Part District of Rainy River	1909, Sept. 21	400 00	Also Mining Recorder.
Watson, T. P.	Englehart	Homestead Inspector	1905, May 10	1,000 00	
Watt, F.	Pembroke	Part Renfrew	1913, May 28	300 00	
Wilson, J.	Kimnount	Part of Peterboro	1905, May 31	175 00	Died May 6, 1915.
Wilson, A. N.	Kimnount.	do do	1915, June 1	175 00	
Whybourne, W. E.	Marksville	do of St. Joseph Island	1905, April 7	250 00	
Woolings, J.	Englehart	do District of Nipissing	1908, June 30	600 00	
Wigle, R. G.	Dryden	Homestead Inspector	1914, May 27	1,000 00	

D. GEO. ROSS,

Accountant.

ALBERT GRIGG,

Deputy Minister of Lands and Forests.

*Appendix No. 3.*

Statement of Lands Sold and Leased. Amount of Sales and Leases and Amount of Collections for the year ending October 31st, 1915.

Service.	Acres sold and leased.	Amount of sales and leases.	Collection on sales and leases.
<i>Lands Sold:</i>		\$ c.	\$ c.
Agricultural and Townsites.....	146,307.19	82,908.28	51,294.40
Mining .....	17,277.85	45,439.10	46,584.88
Clergy .....			99.20
Common School .....	20.30	170.00	3,987.37
Grammar School .....			1,003.29
University .....	5,229.50	2,614.75	1,360.57
<i>Lands Leased:</i>			
Mining .....	2,092.04	2,092.04	13,841 58
Crown .....	3,272.45	1,209.21	39,637.79
	174,199.33	\$134,433.38	\$157,809.08

D. GEO. ROSS,  
Accountant.

ALBERT GRIGG,  
Deputy Minister of Lands and Forests.

## Appendix No. 4.

Statement of Revenue of the Department of Lands, Forests and Mines for the year ending October 31st, 1915.

Service.	\$ c.	\$ c.	\$ c.
<b>LAND COLLECTIONS.</b>			
<i>Crown Lands:</i>			
Agricultural.....	49,364 38		
Townsites .....	1,930 02		
		51,294 40	
Mining.....		46,584 88	
		97,879 28	
Clergy Lands .....	99 20		
Common School Lands .....	3,987 37		
Grammar School Lands .....	1,003 29		
University Lands .....	1,360 57		
		6,450 43	
<i>Rent:</i>			
Mining Leases .....	13,841 58		
Crown Leases .....	39,637 79		
		53,479 37	
Miners' Licenses .....	27,850 73		
Permits .....	481 00		
Recording Fees .....	23,976 97		
		52,308 70	
Royalties.....		52,860 60	
<i>Supplementary Revenue:</i>			
Acreage Tax .....	10,716 24		
Profit Tax .....	139,978 62		
Gas Tax .....	26,406 67		
		177,101 53	
			440,079 91
<b>WOODS AND FORESTS.</b>			
Bonus.....		507,241 43	
Timber Dues .....		928,351 38	
Ground Rent.....		89,952 01	
Transfer Fees.....		2,560 00	
			1,528,104 82
Provincial Assay Fees.....	289 15		
Casual Fees .....	590 56		
Cullers' Fees .....	80 00		
		959 71	
Algonquin Provincial Park .....	2,166 84		
Quetico Provincial Park .....	536 19		
Forest Reserves.....	1,259 50		
		3,962 53	
			4,922 24
<b>REFUNDS.</b>			
Fire Ranging .....		34,902 98	
Wood Ranging .....		11,863 92	
Algonquin Provincial Park .....		1,721 52	
Agents' Salaries .....		343 00	
Mines and Mining .....		47 40	
Salaries and Expenses.....		2 50	
Contingencies .....		85	
			48,882 17
			\$2,021,989 14

D. GEO. ROSS,  
Accountant.

ALBERT GRIGG,  
Deputy Minister of Lands and Forests.



Appendix No. 5.

Statement of Receipts of the Department of Lands, Forests and Mines for the year ending October 31st, 1915, which are considered as Special Funds.

Service.	\$ c.	\$ c.
<i>Clergy Lands.</i>		
Principal.....	60 75	99 20
Interest.....	38 45	
<i>Common School Lands.</i>		
Principal.....	2,121 75	3,987 37
Interest.....	1,865 62	
<i>Grammar School Lands.</i>		
Principal.....	627 15	1,003 29
Interest.....	376 14	
<i>University Lands.</i>		
Principal.....	1,204 13	1,360 57
Interest.....	156 44	
		\$6,450 43

D. GEO. ROSS,  
Accountant.

ALBERT GRIGG,  
Deputy Minister of Lands and Forests.

## Appendix No. 6.

Statement of Disbursements of the Department of Lands, Forests and Mines for the year ending October 31st, 1915.

Service.	\$ c.	\$ c.	\$ c.
AGENTS' SALARIES AND DISBURSEMENTS.			
<i>Land, \$16,855.71.</i>			
Anderson, T. V.....	500 00		
Disbursements.....	31 00		
		531 00	
Arthurs, E. ....		83 86	
Baker, R. H. ....	350 00		
Disbursements.....	5 39		
		355 39	
Bolger, J. W.....	700 00		
Disbursements.....	87 95		
		787 95	
Both, C. ....		200 00	
Brown, J. B. ....	1,000 00		
Disbursements.....	156 95		
		1,156 95	
Buchanan, T. ....		150 00	
Burrows, W. A. ....	700 00		
Disbursements.....	91 60		
		791 60	
Byers, R. J.....	500 00		
Disbursements.....	6 05		
		506 05	
Cameron, W. ....	500 00		
Disbursements.....	39 60		
		539 60	
Campbell, Miss I. M. ....	500 00		
Disbursements.....	13 00		
		513 00	
Dempsey, S. J. ....	600 00		
Disbursements.....	52 20		
		652 20	
Dodds, T. ....		148 80	
Douglas, W. J. ....	500 00		
Disbursements.....	12 50		
		512 50	
Ellis, H. J. ....		500 00	
Freeborn, Dr. J. S. ....	500 00		
Disbursements.....	4 70		
		504 70	
Gibson, J. E. ....	453 27		
Disbursements.....	44 30		
		497 57	
Ginn, F. E. ....	600 00		
Disbursements.....	277 64		
		877 64	
Hales, W. ....		250 00	
Hollands, C. J. ....		300 00	
Jenkin, W. ....	500 00		
Disbursements.....	10 68		
		510 68	

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<b>AGENTS' SALARIES AND DISBURSEMENTS.—Continued.</b>			
<i>Land.—Concluded.</i>			
Langlois, E. ....	500 00		
Disbursements.....	8 00		
		508 00	
Lemieux, J. A. ....		400 00	
McFayden, A. ....	500 00		
Disbursements.....	82 20		
		582 20	
MacLennan, J. K. ....		500 00	
Noble, E. ....		300 00	
Parsons, W. J. ....	500 00		
Disbursements.....	28 25		
		528 25	
Phillion, J. A. ....	500 00		
Disbursements.....	15 45		
		515 45	
Prince, A. ....	500 00		
Disbursements.....	15 50		
		515 50	
Small, R. ....	500 00		
Disbursements.....	25 00		
		525 00	
Spry, W. L. ....	400 00		
Disbursements.....	322 25		
		722 25	
Watt, F. ....		300 00	
Whybourne, W. E. ....	250 00		
Disbursements.....	3 30		
		253 30	
Wilson, J. ....	87 50		
Disbursements.....	8 50		
		96 00	
Wilson, A. N. ....	85 13		
Disbursements.....	3 64		
		88 77	
Woollings, J. ....	600 00		
Disbursements.....	51 50		
		651 50	
<i>Homestead Inspectors, \$12,854.58.</i>			
Barr, J. ....	1,200 00		
Disbursements.....	789 05		
		1,989 05	
Bastien, J. ....	600 00		
Disbursements.....	254 56		
		854 56	
Burnes, C. W. ....	900 00		
Disbursements.....	546 57		
		1,446 57	
Cragg, W. V. ....	1,200 00		
Disbursements.....	320 52		
		1,520 52	



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<b>AGENTS' SALARIES AND DISBURSEMENTS.—Continued</b>			
<i>Homestead Inspectors.—Concluded.</i>			
Dean, T. ....	600 00		
Disbursements.....	15 85		
		615 85	
Hughes, T. ....	700 00		
Disbursements.....	644 90		
		1,344 90	
Quenneville, I. ....	600 00		
Disbursements.....	233 90		
		833 90	
Smith, D. ....	1,000 00		
Disbursements.....	264 00		
		1,264 00	
Watson, T. P. ....	1,000 00		
Disbursements.....	409 78		
		1,409 78	
Wigle, R. G. ....	992 00		
Disbursements.....	583 45		
		1,575 45	
<i>Timber, \$29,892.74.</i>			
Bremner, G. ....	1,300 00		
Disbursements.....	351 95		
		1,651 95	
Christie, W. P. ....	1,600 00		
Disbursements.....	258 29		
		1,858 29	
Hawkins, S. J. ....	1,500 00		
Disbursements.....	400 30		
		1,900 30	
Henderson, C. ....	1,800 00		
Webster, W. A., Assistant	1,600 00		
Disbursements.....	590 96		
		3,990 96	
Johnson, S. M. ....	1,600 00		
Disbursements.....	187 25		
		1,787 25	
MacDonald, S. C. ....	1,600 00		
Disbursements.....	259 15		
		1,859 15	
Margach, W. ....	1,600 00		
Legris, J., Assistant	1,300 00		
Disbursements.....	1,467 33		
		4,367 33	
Maughan, J. ....	1,500 00		
Disbursements.....	692 37		
		2,192 37	
McDonald, H. ....	1,500 00		
Disbursements.....	332 53		
		1,832 53	
McDougall, J. T. ....	1,600 00		
Disbursements.....	444 77		
		2,044 77	
Oliver, J. A. ....	1,500 00		
Disbursements	1,022 59		
		2,522 59	
Stevenson, A. ....	1,500 00		
Disbursements	544 80		
		2,044 80	
Watts, G. ....	1,500 00		
Disbursements	340 45		
		1,840 45	

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<b>AGENTS' SALARIES AND DISBURSEMENTS.—<i>Concluded</i></b>						
<i>Miscellaneous, \$2,392.10.</i>						
Bilton, G., Caretaker Islands in North and South Crosby .....			25	00		
Edye, W. K., Inspection Timber North of Wabigoon Township .....			4	20		
Guthrie, W., Caretaker Islands in Devil's Lake .....			25	00		
Jamieson, W., Caretaker Islands in Dog and Laboria Lakes .....			50	00		
Johnston, T., Inspection Timber North of Wabigoon Township .....			34	02		
Leetham, E. S., Inspection of Lemieux and Bell Islands .....			50	00		
McArthur, T. A., Inspector of Agencies .....	600	00				
Disbursements .....	612	95				
			1,212	95		
McDonald, T., Inspection Timber North of Wabigoon Township .....			17	39		
Nicholas, D. G., Inspection Timber North of Wabigoon Township .....			3	35		
Pronger, R. H., Acting Crown Lands Agent .....	118	34				
Disbursements .....	17	75				
			136	09		
Stewart, J. A., Inspection of Townships Shackleton, Fauquier and Newmarket .....	170	00				
Disbursements .....	657	10				
			827	10		
Tapping, T., Disbursements <i>re</i> Inspection of Township Miller .....			7	00		
					61,995	13
<b>OTTAWA AGENCY.</b>						
Darby, E. J., Agent .....			1,500	00		
Larose, S. C., Clerk .....			1,000	00		
Rent .....	700	00				
Disbursements .....	62	15				
			762	15		
<b>WOOD RANGING.</b>						
Allen, R. A. ....			765	00		
Ansley, W. E. ....			805	00		
Arnill, Wm. ....			1,060	00		
Atcheson, Ira M. ....			605	00		
Bailey, S. J. ....	1,076	50				
Disbursements .....	22	59				
			1,099	09		
Barrett, Thos. ....			905	00		
Bates, R. ....			364	00		
Balsdon, G. ....			156	00		
Bedard, I. ....			20	25		
Belanger, T. ....			20	25		
Bliss, L. E. ....	510	00				
Disbursements .....	29	90				
			539	90		
Brooks, W. J. ....			345	00		
Buisson, Wm. ....			920	00		
Callahan, T. ....			580	00		
Carried forward .....					65,257	28

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			65,257 28
<i>WOOD RANGING.—Continued.</i>			
Canon, Joe .....		67 50	
Carlson, C. ....		240 50	
Castonguay, A. C. ....		825 00	
Carter, G. ....		328 00	
Chenier, D. A. ....		1,300 00	
Clairmont, E. ....		24 00	
Comer, B. F. ....		372 00	
Corrigan, R. T. ....		865 00	
Coyne, Phin. ....		625 00	
Darling, J. M. ....		150 00	
Dennie, F. J. ....		127 50	
Didier, H. ....		1,375 00	
Dougherty, J. M. ....		24 00	
Doxsee, J. E. ....		90 00	
Duval, C. A. ....		720 00	
Edye, W. K. ....		8 00	
Elliott, Wm. ....		528 00	
Fairbairn, N. H. ....		572 00	
Ferguson, E. A. ....		1,180 00	
Fisher, Geo. ....		775 00	
Fraser, W. A. ....		512 00	
Fraser, D. ....		895 00	
Fraser, T. ....		120 00	
Gamey, W. H. ....		655 00	
Gauthier, O. ....		169 00	
Gilligan, E. ....		1,120 00	
Gordon, J. B. ....		640 00	
Hagan, E. G. ....		90 00	
Hartley, C. ....		1,035 00	
Hawkins, S. J. ....		40 42	
Henderson, Chas. .... Disbursements..		274 25	
Henderson, A. ....		635 00	
Hey, Ben ....		244 00	
Hogarth, J. R. ....		765 00	
Huckson, A. H. .... Disbursements..		3 75	
Hurdman, W. H. ....		750 00	
Hutton, J. ....		1,095 00	
Irving, E. ....		112 00	
Jean, A. ....		150 75	
Johnston, T. ....		296 00	
Jones, W. ....		496 00	
Kelly, J. ....		177 50	
Kernahan, G. ....		312 00	
Leblanc, E. ....		507 75	
Leblanc, O. ....		267 00	
Lee, J. B. ....		760 00	
Linklater, Geo. ....		33 00	
Long, H. E. ....	900 00		
Disbursements .....	36 90		
Macdonell, R. D. ....		936 90	
MacGillivray, G. ....		710 00	
Manice, Wm. ....		237 00	
Margach, Wm. .... Disbursements..		1,035 00	
Margach, J. A. ....	730 00	497 68	
Disbursements .....	112 25		
Matheson, O. R. ....		842 25	
Maughan, J. .... Disbursements..		485 00	
		17 95	
<i>Carried forward</i> .....			65,257 28



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			65,257 28
<i>WOOD RANGING.—Continued.</i>			
Menzies, A. ....		1,560 00	
Miller, Wishart .....		153 75	
Milway, J. H. ....	755 00		
Disbursements .....	13 25		
		768 25	
Minher, R. ....		20 25	
Molyneaux, Geo. ....		635 00	
Mooney, L. ....	1,929 00		
Disbursements .....	324 46		
		2,253 46	
Moran, A. ....		1,375 00	
Morel, H. ....		500 00	
Murray, Wm. ....		1,375 00	
McAuley, Wm. ....		835 00	
McCaw, J. G. ....		1,555 00	
McCaw, Joe .....		260 00	
McDonald, T. ....		568 00	
McDonald, J. D. ....		1,425 00	
McDonald, H. ....	Disbursements..	41 55	
McDougall, J. T. ....	Disbursements..	153 01	
McGillivray, D. D. ....		36 00	
McGregor, C. F. ....		180 00	
McIntyre, Robt. ....		277 50	
McInnis, A. D. ....		805 00	
McLaughlin, John .....		544 00	
McLean, John .....		1,550 00	
McLeod, Wm. ....		67 50	
McNabb, A. ....		860 00	
McPherson, J. S. ....		1,430 00	
McRae, D. A. ....		692 00	
Nault, Jas. ....		348 00	
Nibblet, Jas. ....		335 00	
Oliver, J. A. ....	Disbursements..	78 70	
Paul, C. A. ....	Disbursements..	421 73	
Pigott, J. A. ....		575 00	
Pritchard, F. ....		7 00	
Reid, J. P. ....		1,220 00	
Ridley, Robert .....		1,350 00	
Ritchie, A. W. ....		500 00	
Ritchie, J. F. ....		605 00	
Robertson, J. D. ....		488 00	
Ross, S. ....		460 00	
Rusk, O. ....		755 00	
Ryan, A. M. ....		78 00	
Sanderson, D. ....		840 00	
Share, Jas. ....		1,040 00	
Shaw, Alf. ....		935 00	
Sheppard, S. ....		110 50	
Simpson, Wm. ....		1,260 00	
Smith, V. ....		7 00	
Spence, Dalton .....		1,020 00	
Stein, P. ....		536 15	
Taylor, L. D. ....		43 50	
Thompson, W. B. ....	1,035 75		
Disbursements .....	6 40		
		1,042 15	
Tichborn, A. ....		72 00	
Urquhart, A. ....		950 00	
<i>Carried forward</i> .....			65,257 28

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
Brought forward .....			65,257 28
WOOD RANGING.— <i>Concluded.</i>			
Vincent, H. T. ....		1,295 00	
Webster, W. A. .... Disbursements ..		506 68	
Western, C. ....		745 00	
Whelan, P. J. ....		1,425 00	
White, A. T. ....		660 00	
Wilkins, G. N. ....		775 00	
Wilson, R. ....		488 00	
Wilson, David ....		1,520 00	
Windle, Jas. ....		241 50	
Wood, W. D. ....		755 00	
Wylie, D. M. ....		640 00	
Yuill, Thomas ....		1,370 00	
Young, R. J. ....		480 00	
			81,197 37
ESTIMATING FOREST RESERVES.			
Henderson, Chas. .... Disbursements ..			26 19
FIRE RANGING.			
Acheson, J. M. ....		327 50	
Acton, J. ....		17 00	
Adams, Alex. ....		337 50	
Allan, D. ....		324 50	
Allen, R. A. ....		915 00	
Allen, David ....		342 50	
Allen, Wm. ....		70 00	
Argue, D. ....		42 50	
Armstrong, E. L. ....		345 00	
Armstrong, W. H. ....		347 50	
Armstrong, F. C. ....		340 00	
Ashby, L. ....		330 00	
Bailey, Henry ....		382 50	
Bartlett, G. W. .... Disbursements ..		199 80	
Bartlett, H. ....		33 65	
Bateson, V. ....		315 00	
Beaumont, A. ....		345 00	
Bedal, W. ....		337 50	
Belcher, E. A. ....		337 50	
Berrige, G. ....		290 00	
Bliss, L. E. .... Disbursements ..		163 31	
Boice, R. ....		16 00	
Boivin, J. ....		340 00	
Bookhout, H. ....		322 50	
Bonter, S. ....		337 50	
Bottrell, D. ....		317 50	
Bouchard, A. ....		42 50	
Boyle, G. B. ....		315 00	
Bowland, J. J. ....	488 00		
Disbursements .....	69 45		
		557 45	
Brander, G. L. ....		347 50	
Briggs, A. ....		272 50	
Brown, T. E. ....		345 00	
Brozeau, O. ....		332 50	
Brum, A. ....		840 00	
Bulmer, A. ....		310 00	
Carried forward .....			146,480 84

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			146,480 84
<i>FIRE RANGING.—Continued.</i>			
Busch, H. ....		327 25	
Butler, W. J. ....		307 50	
Burns, R. ....		340 00	
Campbell, Walter .....		292 50	
Campbell, W. ....		312 50	
Campbell, D. ....		360 00	
Campbell, J. S. ....		290 00	
Campbell, Alex. ....		310 00	
Carris, E. ....		21 54	
Carmichael, W. A. ....		312 50	
Carnochan, G. ....		310 00	
Case, G. ....		310 00	
Cavanagh, S. ....		322 50	
Chaloner, C. ....		280 50	
Chaffey, Wm. ....		352 50	
Chambers, T. ....		277 50	
Chambers, T. ....		345 00	
Chapman, Wm. ....		322 50	
Chappis, J. ....		312 50	
Chittick, W. J. ....		352 50	
Christie, W. P. ....	Disbursements..	436 28	
Clark, H. ....		330 00	
Clarke, W. R. ....		840 00	
Clayton, B. ....		20 92	
Cluff, R. A. ....		330 00	
Code, Jas. ....		315 00	
Coghlan, H. ....		315 00	
Cole, A. ....		337 50	
Connell, W. ....		410 00	
Coyne, J. E. ....		24 00	
Coyne, Phin .....	810 00		
Disbursements .....	176 09		
Crawford, J. ....		986 09	
Cummins, T. A. ....		320 00	
Curry, P. W. ....		345 00	
Davidson, Ira ....		355 00	
Davison, J. ....		330 00	
Deacon, A. ....		335 00	
DeLaronde, D. ....		30 00	
Depencier, G. ....		125 00	
Derouard, M. ....		317 50	
Didier, L. P. ....		302 50	
Dion, Geo. ....		920 00	
Donaldson, C. ....		330 00	
Duff, R. A. ....		340 00	
Dukes, V. ....		35 00	
Durnin, Chas. ....		315 00	
Ebert, J. ....		604 00	
Eilber, Geo. ....		340 00	
Elliott, J. ....		337 50	
Ellis, E. C. ....		310 00	
English, M. ....		345 00	
English, Morelle .....		337 50	
Enright, T. ....		316 25	
Fairbairn, N. H. ....		317 50	
Favereau, Geo. ....		850 00	
		335 00	
<i>Carried forward</i> .....			146,480 84



## Appendix No. 6.—Continued.

Service.	\$	c.	\$	c.	\$	c.
Brought forward .....					146,480	84
FIRE RANGING.—Continued.						
Ferguson, Thos. ....			237	50		
Ferguson, D. ....			322	50		
Fisher, Geo. ....			840	00		
Fitzback, J. ....			22	50		
Fitzpatrick, P. ....			420	00		
Flynn, M. ....			337	50		
Flynn, W. J. ....			307	50		
Foster, Wm. ....			322	50		
Fraser, A. ....			50	00		
Fraser, Alex. ....			357	50		
Fraser, W. A. ....			340	00		
Fullerton, E. ....			75	00		
Furry, C. ....			337	50		
Gagne, F. ....	775	00				
Disbursements .....	184	10				
			959	10		
Gagne, J. ....			327	50		
Gagnon, P. ....			312	50		
Gale, W. J. ....			322	50		
Gale, E. J. ....			307	50		
Gault, R. ....			335	50		
Gauthier, Theo. ....			337	50		
Gemmill, John ....	488	00				
Disbursements .....	174	90				
			662	90		
Giguire, A. ....			45	00		
Gillanders, G. K. ....			355	00		
Godfrey, W. ....			297	50		
Hackett, W. ....			325	00		
Hagerman, G. H. ....			310	00		
Hall, T. ....			315	00		
Hand, T. ....			488	00		
Hardy, F. ....			230	00		
Hartley, K. ....			320	00		
Harvey, C. B. S. ....			300	00		
Henderson, Chas. ....			381	69		
Henderson, J. ....			340	00		
Hicks, A. ....			18	46		
Higgins, R. ....			300	00		
Hogan, J. C. ....			345	00		
Holmes, J. H. ....			337	50		
Holt, J. ....			332	50		
Horigan, E. J. ....			330	00		
Hough, J. A. ....			322	50		
Houghton, C. L. ....			315	00		
Huckson, A. H. ....	1,600	00				
Disbursements .....	180	49				
			1,780	49		
Hudgins, W. ....			345	00		
Hyde, James ....			335	00		
Irish, Wm. ....			372	50		
Irving, E. ....			325	00		
Irwin, T. N. ....			315	00		
Jamieson, K. ....			345	00		
Jenkins, S. ....	642	00				
Disbursements .....	214	00				
			856	00		
Jerritt, E. L. ....			345	00		
Carried forward .....					146,480	84

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			146,480 84
<i>FIRE RANGING.—Continued.</i>			
Johnston, W. ....		422 50	
Johnson, S. A. ....		324 50	
Jones, R. ....		327 50	
Jones, E. ....		310 00	
Keely, C. A. ....		337 50	
Keenahan, Matt. ....		337 50	
Kells, L. ....		327 00	
Kelly, T. ....		330 00	
Kemp, H. ....		235 00	
Kerr, Alex. ....		300 00	
King's Printer .....Supplies ..		652 63	
Kinney, W. ....		368 50	
Laberge, Chas. ....		327 50	
Lajennesse, A. ....		302 50	
Lee, E. J. ....		340 00	
Lee, J. B. ....	740 00		
Disbursements .....	216 63		
		956 63	
Linklater, W. ....		422 50	
Lofquist, M. ....		335 00	
Long, H. E. ....	765 00		
Disbursements .....	25 88		
		790 88	
Lonktree, J. ....		340 00	
Loy, R. ....		302 50	
MacDonald, S. C.....Disbursements ..		34 28	
MacDonald, M. ....		317 50	
Macdonell, R. D. ....		840 00	
MacNeill, E. R. ....		337 50	
MacGillivray, G. ....		305 00	
Maidens, W. ....		315 00	
Margach, Wm. ....Disbursements ..		874 69	
Margach, J. A. ....		255 75	
Mathers, J. A. ....		337 50	
Maxwell, A. D. ....		315 00	
May, H. ....	750 00		
Disbursements .....	95 63		
		845 63	
Merritt, J. ....		20 31	
Metcalf, T. ....		297 50	
Milway, J. H. ....		840 00	
Mitchell, F. ....		340 00	
Molyneaux, G. ....	312 50		
Disbursements .....	156 25		
		468 75	
Monahan, P. ....		420 00	
Montrue, G. C. ....		315 00	
Morand, L. ....		335 00	
Moody, C. D. ....		322 50	
Moore, C. ....		352 50	
Moorehead, W. C. ....		315 00	
Morin, J. ....		335 00	
Morrison, M. C. ....		315 00	
Moyles, J. ....		14 00	
McAulay, W. D. ....		444 00	
McCart, H. M. ....		330 00	
McCullough, D. J. ....		337 50	
McDonald, A. ....		315 00	
<i>Carried forward</i> .....			146,480 84
3 L.M.			

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					146,480	84
<i>FIRE RANGING.—Continued.</i>						
McGuire, R. B. ....			215	00		
McKechnie, J. ....			82	50		
McKinnon, H. ....			330	00		
McLean, A. ....			197	50		
McLennon, D. ....			21	00		
McMillan, J. ....			245	00		
McMillan, D. H. ....			100	00		
McNeely, M. ....			317	50		
McQuinn, W. J. ....			315	00		
McRae, D. A. ....			459	00		
Nabigon, E. ....			312	50		
Nelson, N. ....			410	00		
Newburn, Wm. ....			488	00		
Newhouse, A. ....			195	00		
Niddery, A. E. ....			257	50		
Nugent, Wm. ....			332	50		
Oakes, James ....			315	00		
Ogle, F. ....			324	50		
Oliver, J. A. .... Disbursements ..			416	97		
Ouderkirk, J. ....			207	50		
Ouellette, F. ....			285	00		
Patterson, Wm. ....			352	50		
Passmore, J. ....			307	50		
Pearson, W. ....			325	00		
Perrault, E. ....			82	50		
Peterborough Lumber Co. ....			1,000	00		
Pringle, A. ....			315	00		
Pitt, W. W. ....			322	50		
Piper, C. R. ....			315	00		
Plouffe, W. ....			312	50		
Porter, B. ....			28	26		
Predhomme, A. ....			240	00		
Prestley, J. ....			335	00		
Pritchard, F. ....			493	50		
Prophet, E. ....			352	50		
Rabbitts, Max ....			840	00		
Racey, M. J. ....			315	00		
Read, C. F. ....			377	50		
Redden, M. B. ....			337	50		
Revells, L. O. ....			748	00		
Richardson, J. ....			315	00		
Richardson, G. B. ....			305	00		
Riddell, W. R. ....			332	50		
Rivet, Z. ....			330	00		
Rivet, A. ....			350	00		
Robertson, J. ....			26	92		
Robinson, J. B. ....			322	50		
Rochfort, A. ....			337	50		
Roe, N. ....			352	50		
Rowe, James ....			342	50		
Ross, H. L. ....			315	00		
Roy, C. ....			23	00		
Rusk, O. W. ....			755	00		
Disbursements .....			2,948	65		
					3,703	65
Ryan, T. ....					82	50
Sanderson, S. ....					422	50
<i>Carried forward</i> .....					146,480	84



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			146,480 84
<i>FIRE RANGING.—Continued.</i>			
Saunders, H. A. ....		345 00	
Sauve, J. ....		330 00	
Savard, A. ....		312 50	
Schaffner, J. ....		75 00	
Schenk, N. ....		337 50	
Scott, Robt. ....		488 00	
Scott, A. A. ....		295 00	
Shannette, L. ....		315 00	
Sheriden, W. E. ....		330 00	
Slack, P. B. ....		315 00	
Sloss, R. W. ....		300 00	
Small, M. A. ....		340 00	
Smith, V. ....		525 00	
Smith, G. J. ....		327 50	
Smith, E. J. ....		317 50	
Smith, J. ....		30 70	
Spence, A. ....		324 50	
Spence, D. ....		280 00	
Stairs, C. G. ....		315 00	
Stephens, W. H. ....		315 00	
Stevens, W. J. ....		315 00	
Stevenson, J. A. ....		257 50	
Stewart, J. A. ....	765 00		
Disbursements .....	401 18		
		1,166 18	
Stewart, C. ....		305 00	
Stilwell, J. ....		352 50	
Swanson, G. ....		324 50	
Sudds, D. ....		295 00	
Tang, J. ....		337 50	
Tate, J. ....		337 50	
Tichborn, A. ....		275 00	
Thompson, Ahern Co. ....		56 75	
Thompson, M. A. ....		337 50	
Thompson, E. ....	312 50		
Disbursements .....	156 25		
		468 75	
Thompson, R. G. ....		315 00	
Thompson, F. H. ....		270 00	
Thomas, Hooper .....		312 50	
Toomer, S. ....		312 50	
Torrance, C. W. ....		292 50	
Trembley, E. ....		330 00	
Tripp, E. C. ....		345 00	
Tucker, D. ....		300 00	
Twiss, E. O. ....		292 50	
Urquhart, A. ....		488 00	
Valois, P. ....		330 00	
Vigars, A. ....		292 50	
Wagner, F. ....		28 26	
Walker, G. ....		315 00	
Watson, R. ....		327 50	
Watson, M. ....		41 54	
Watts, Geo. ....	Disbursements	113 08	
Watts, H. W. ....		297 50	
Watt, M. A. ....		315 00	
Wattie, W. ....		17 00	
Welsh, James .....		340 00	
<i>Carried forward</i> .....			146,480 84

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					146,480	84
<i>FIRE RANGING.—Concluded.</i>						
Weir, G. A. ....			287	50		
West, W. ....			340	00		
Western, C. ....			459	00		
White, T. A. ....			312	50		
White, J. H. ....			760	00		
Wickens, H. ....			357	50		
Williams, J. ....			324	50		
Williams, H. B. ....			32	50		
Wilkins, G. N. ....			488	00		
Wilson, J. G. ....			315	00		
Windle, Jas. ....			920	00		
Wood, W. D. ....			411	00		
Woods, S. ....			337	50		
Wright, J. S. ....			350	00		
Wright, H. H. ....			310	00		
Zavitz, E. J. .... Disbursements ..			182	50		
					111,250	79
<i>FOREST RESERVES.</i>						
<i>Temagami Reserve, \$31,740.34.</i>						
Albright, E. ....			337	50		
Aldred, O. ....			195	00		
Allen, Geo. ....			135	00		
Angel, L. E. ....			307	50		
Aubee, T. ....			327	50		
Barrett, Thos. ....	765	00				
Disbursements ..	35	93				
			800	93		
Batten, B. ....			337	50		
Belanger, O. ....			287	50		
Benoit, E. ....			332	50		
Bickell, R. R. ....			335	00		
Black, Geo. ....			327	50		
Boivin, H. ....			335	00		
Bragg, F. ....			335	00		
Brown, J. R. ....			322	50		
Cantin, A. ....			135	00		
Card, N. ....			327	50		
Carleton, Geo. ....			335	00		
Cavill, A. H. ....			335	00		
Champagne, I. ....			332	50		
Chennette, Jas. ....			262	50		
Cross, W. E. ....			265	00		
Daley, T. B. ....			90	00		
Dial, A. C. ....			297	50		
Evans, W. H. ....			267	50		
Faeris, R. ....			1,065	50		
Fahey, V. ....			327	50		
Ferris, R. H. C. ....			322	50		
Frame, R. R. ....			327	50		
Grant, E. ....			190	00		
Grenier, Jas. ....			335	00		
Goodearle, W. E. ....			355	00		
Harrison, J. W. ....			912	50		
Hartt, I. B. ....			307	50		
Harper, B. H. ....			335	00		
Henrick, C. ....			357	50		
<i>Carried forward</i> .....					257,731	63

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			257,731 63
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Continued.</i>			
Herlihy, D. ....	1,300 00	347 50	
Hindson, C. E. ....	499 67		
Disbursements ..		1,799 67	
Hunter, B. J. ....		327 50	
Hughes, C. ....		197 50	
Jacob, S. ....		442 50	
Jermyn, C. ....		247 50	
Keenan, Jas. ....		335 00	
Kennedy, Wm. ....		40 00	
Kerrigan, A. C. ....		267 50	
Klotz, Thos. ....		335 00	
Lamarche, A. ....		912 50	
La Venture, G. E. ....		255 00	
Lawson, M. ....		265 00	
Leach, J. ....		335 00	
Leggo, C. ....		327 50	
Mansfield, J. ....		327 50	
Marshall, F. R. ....		167 50	
Minnes, W. G. ....		337 50	
Montrueil, L. ....		200 00	
Moorehouse, H. C. ....		335 00	
Morrison, R. R. ....		335 00	
Murphy, Peter ....		285 00	
McKnight, H. ....		187 50	
McLeish, Wm. ....		267 50	
McNiven, A. J. ....		190 00	
McNulty, T. P. ....		332 50	
McPherson, G. L. ....		327 50	
Nadon, P. ....		335 00	
Neil, Wm. ....		262 50	
Nicholas, H. ....		345 00	
Page, E. L. ....		267 50	
Papineau, Jos. ....		335 00	
Passmore, S. ....		337 50	
Petrant, Wm. ....		347 50	
Pirie, J. B. ....		165 00	
Porter, C. M. ....		230 00	
Poulin, Wm. ....		150 00	
Quesnel, F. ....		327 50	
Russell, W. G. ....		167 50	
Sage, P. ....		345 00	
Sanderson, J. E. ....		327 50	
Saville, T. ....		25 00	
Simpson, Jos. ....		265 00	
Simpson, Theo. ....		267 50	
Sparks, Wilmot ....		327 50	
Stewart, J. ....		267 50	
Turner, J. ....		335 00	
Vivaris, D. ....		912 50	
Vivaris, M. ....		335 00	
White, Jas. ....		332 50	
Whitmore, R. ....		442 50	
Wickett, H. ....		155 00	
Wilding, C. H. ....		327 50	
<i>Carried forward</i> .....			257,731 63



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			257,731 63
<i>FOREST RESERVES.—Continued.</i>			
<i>Temagami Reserve.—Concluded.</i>			
Wilson, B. ....		337 50	
Wilson, W. F. ....		267 50	
Winder, A. ....		282 50	
Young, R. J. ....	780 00		
Disbursements .....	211 75		
		991 74	
<i>Metagami Reserve, \$7,148.78.</i>			
Ainslie, A. ....		342 50	
Blackwell, J. J. ....		345 00	
Boyd, D. M. ....		340 00	
Burden, Jas. ....		275 00	
Burden, John ....	830 00		
Disbursements .....	176 28		
		1,006 28	
Chatson, Fred. ....		160 00	
Fordham, H. ....		112 50	
Groulx, Jos. ....		342 50	
Guy, J. E. ....		340 00	
Mackey, E. L. ....		342 50	
McMennemy, Wm. ....		362 50	
McMennemy, Geo. ....		322 50	
Murray, G. ....		282 50	
Ogg, C. S. ....		302 50	
Platt, S. ....		345 00	
Porter, C. H. ....		145 00	
Poulin, N. ....		342 50	
Poulin, D. ....		342 50	
Souter, M. J. ....		302 50	
Stirrett, H. C. ....		342 50	
Stoddard, T. ....		340 00	
Veitch, L. T. ....		112 50	
<i>Mississaga Reserve.—\$15,768.57.</i>			
Acheson, L. ....		568 00	
Allen, Geo. ....		357 50	
Allen, H. M. ....		340 00	
Armstrong, A. H. ....		360 00	
Bourke, J. ....		327 50	
Boyd, Thos. ....		195 00	
Burden, Wm. ....		564 00	
Burden, J. H. ....		320 00	
Burns, T. ....		192 50	
Carpenter, R. J. ....		315 00	
Carson, J. E. ....		337 50	
Cornett, W. G. ....		335 00	
Dixon, A. J. ....		340 00	
Doherty, A. E. ....		572 00	
Doyle, Gus. ....		352 50	
Draper, Wm. ....		277 50	
Dupuis, T. ....		322 50	
Duval, C. A. ....	770 00		
Disbursements .....	279 57		
		1,049 57	
Ferrier, W. B. ....		360 00	
<i>Carried forward</i> .....			257,731 63

*Appendix No. 6.—Continued.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					257,731	63
<i>FOREST RESERVES.—Continued.</i>						
<i>Mississauga Reserve.—Concluded.</i>						
Flannagan, J. E. ....			337	50		
Gadke, F. ....			340	00		
Handley, J. S. ....			340	00		
Holdenby, C. ....			345	00		
Hotte, E. C. ....			322	50		
Johnston, J. W. ....			290	00		
Joyce, R. E. ....			360	00		
Lacomb, J. B. ....			320	00		
Luke, Sam. ....			325	00		
Malley, A. L. ....			360	00		
Miller, W. J. ....			352	50		
Moore, C. A. ....			340	00		
Morel, H. ....			312	50		
McAulay, Robt. ....			360	00		
McKendrick, H. G. ....			325	00		
McLaughlin, J. ....			320	00		
Preston, H. E. ....			297	50		
Saunders, Geo. ....			317	50		
Saunders, C. ....			300	00		
Sawyers, C. ....			295	00		
Smith, H. L. ....			130	00		
Spaniel, A. ....			270	00		
Thompson, A. A. ....			310	00		
Thorn, L. ....			312	50		
Wilson, R. H. ....			360	00		
Yearly, G. S. ....			340	00		
<i>Nepigon Reserve, \$9,383.24.</i>						
Barker, C. ....			352	50		
Barker, A. ....			265	32		
Barton, John ....			100	00		
Blair, Bert. ....			422	50		
Blair, G. ....			317	50		
Bliss, L. E. ....	1,170	00				
Disbursements .....	1,918	58				
			3,088	58		
Bouchard, J. ....			505	00		
Connell, Wm. ....			45	00		
Cowtoche, J. ....			6	00		
Daba, M. ....			22	50		
Esquaga, Mr. ....			15	00		
Fitzback, J. ....			325	00		
Fraser, A. ....			110	00		
Hardy, F. ....			30	00		
Lafontaine, P. ....			450	00		
McDonald, J. ....			5	00		
McKechnie, J. ....			302	50		
McLean, A. ....			120	00		
McNairn, Wm. ....			185	00		
Nicholson, J. ....			447	50		
Newhouse, A. ....			187	50		
Perkins, A. ....			35	00		
Pigeon, C. ....			370	00		
Podan, J. ....			22	50		
<i>Carried forward</i> .....					257,731	63

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			257,731 63
FOREST RESERVES.— <i>Concluded.</i>			
<i>Nepigon Reserve,—Concluded.</i>			
Rae, A. ....		297 50	
Reeve, A. ....		170 00	
Ryan, T. ....		302 50	
Salsbury, M. ....		553 34	
Shabegestic, J. ....		6 00	
Shabegestic, C. ....		6 00	
Shilling, H. ....		157 50	
Thompson, Jas. ....		150 00	
Winn, J. ....		10 50	
<i>Eastern Reserve, \$2,482.66.</i>			
Brooks, M. ....		307 50	
Bushel, D. ....		310 00	
Head, Geo. ....		310 00	
Holmes, W. ....		307 50	
McGregor, D. ....		310 00	
Smith, Chas. ....		310 00	
Tapping, Thos. ....	600 00		
Disbursements .....	27 66		
		627 66	
<i>Sibley Reserve, \$790.00.</i>			
Hornick, Geo. ....		345 00	
Oliver, J. A. ....		100 00	
Quinn, J. J. ....		345 00	
			67,313 59
FORESTRY.			
Bell Telephone Company .....	35 25		
Express and Cartage .....	99 60		
		134 85	
Supplies .....		2,351 95	
Labor .....		6,380 54	
Sundries .....		170 25	
			9,037 59
MINES AND MINING.			
Miller, W. G., Provincial Geologist, services.....	4,550 00		
Disbursements .....	215 53		
		4,765 53	
Knight, C. W., 1st Assistant Geologist, services...	2,250 00		
Disbursements .....	743 43		
		2,993 43	
Burrows, A. G., 2nd Assistant Geologist, services..	2,150 00		
Disbursements .....	359 84		
		2,509 84	
Hopkins, P. E., 3rd Assistant Geologist, services..	1,500 00		
Disbursements .....	480 55		
		1,980 55	
Rogers, W. R., Topographer, services.....	1,850 00		
Disbursements .....	63 50		
		1,913 50	
Bell, W. J., Cartographer, services .....		1,500 00	
Mickle, G. R., Mine Assessor, services .....	4,000 00		
Disbursements .....	450 80		
		4,450 80	
<i>Carried forward</i> .....			334,082 81



*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			334,082 81
<i>MINES AND MINING.—Concluded.</i>			
Godson, T. E., Mining Commissioner, services.....	4,300 00		
Morris, W. H., Mining Commissioner's Clerk, services .....	1,350 00		
Disbursements .....	1,679 95	7,329 95	
Sutherland, T. F., Chief Inspector of Mines, services .....	2,500 00		
Disbursements .....	1,045 20	3,545 20	
Collins, E. A., 1st Assistant Inspector of Mines, services .....	2,300 00		
Disbursements .....	1,377 63	3,677 63	
McMillan, J. G., 2nd Assistant Inspector of Mines, services .....	2,300 00		
Disbursements .....	628 20	2,928 20	
Bartlett, Jas., 3rd Assistant Inspector of Mines, services .....	2,300 00		
Disbursements .....	1,507 92	3,807 92	
McArthur, T. A., Inspector of Recorders' Offices, services .....	700 00		
Disbursements .....	569 20	1,269 20	
Bennett, J. O., services .....		60 00	
Beno, J. W., services.....	250 98		
Disbursements .....	106 12	357 10	
Greenland, C. W., services .....		142 31	
Near, A. E., services .....	600 00		
Disbursements .....	105 30	705 30	
Parsons, A. L., services .....	415 81		
Disbursements .....	840 47	1,256 28	
Scott, John, services .....	700 00		
Disbursements .....	271 71	971 71	
King's Printer .....		452 68	
Methodist Book Room .....		198 56	
Express .....		8 00	
Sundries .....		243 32	
			47,066 01
<i>MINING RECORDERS.</i>			
Bowker, S. T., Recorder .....	614 90		
Miller, N., Recorder .....	384 10		
Disbursements .....	288 83	1,287 83	
Campbell, C. A., Recorder .....	900 00		
Glazier, M. B., Clerk .....	353 08		
Shanahan, Miss M., Stenographer.....	480 00		
Disbursements .....	383 80	2,116 88	
<i>Carried forward</i> .....			381,148 82

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			381,148 82
<i>MINING RECORDERS.—Concluded.</i>			
Gauthier, G. H., Recorder .....	1,500 00		
Graham, F. W., Clerk .....	200 01		
O'Brien, J. D., Clerk .....	1,019 98		
Glazier, M. B., Clerk .....	636 92		
Disbursements .....	571 82		
		3,928 73	
Hough, J. A., Recorder .....	1,200 00		
Browning, A. J., Clerk .....	1,000 00		
Ginn, H. G., Clerk .....	150 00		
Gardiner, Miss I. M., Stenographer .....	196 15		
Disbursements .....	583 00		
		3,129 15	
McQuire, H. F., Recorder .....	500 00		
Disbursements .....	159 23		
		659 23	
Morgan, J. W., Recorder .....	1,000 00		
Disbursements .....	318 39		
		1,318 39	
Sheppard, H. E., Recorder .....	1,000 00		
Disbursements .....	142 05		
		1,142 05	
Skill, A., Recorder .....	1,200 00		
Disbursements .....	40 00		
		1,240 00	
Smith, G. T., Recorder .....	1,223 00		
McAulay, N. J., Recorder .....	701 65		
Sarsfield, J. M., Clerk .....	1,200 00		
Munroe, Miss E., Stenographer .....	780 00		
Smith, Miss M. H., Stenographer .....	298 10		
Disbursements .....	775 61		
		4,978 36	
Spry, W. L., Recorder .....	750 00		
Disbursements .....	102 25		
		852 25	
Express .....	77 32		
King's Printer .....	495 09		
Methodist Book Room .....	34 66		
		607 07	
			21,259 94
<i>PROVINCIAL ASSAY OFFICE.</i>			
McNeill, W. K. ....		1,800 00	
Rothwell, T. E. ....	1,200 00		
Disbursements .....	46 25		
		1,246 25	
Supplies .....	423 97		
Disbursements .....	102 02		
		525 99	
			3,572 24
<i>CULLERS' ACT.</i>			
Christie, W. P. .... Disbursements ..		9 60	
Duff, A. S., Services .....	24 00		
Disbursements .....	11 40		
		35 40	
McDougall, J. T. .... Disbursements ..		10 60	
			55 60
<i>Carried forward</i> .....			406,036 60

*Appendix No. 6.—Continued.*

Service.	\$ c.	\$ c.	\$ c.
<i>Brought forward</i> .....			406,036 60
EXPENSES NOT OTHERWISE PROVIDED FOR.			
Brophy, W., Salary <i>re</i> Toronto Exhibition.....	47 50		
Follis, Robt., Salary <i>re</i> Toronto Exhibition.....	30 00		
Mathewson, N., Salary <i>re</i> Toronto Exhibition....	100 00		
West, W., Salary <i>re</i> Toronto Exhibition.....	42 50		
McNeill, W. K., Disbursements <i>re</i> Toronto Exhibition .....	69 95		
Rothwell, T. E., Salary and Disbursements <i>re</i> Toronto Exhibition .....	50 65		
		340 60	
General Disbursements <i>re</i> Toronto Exhibition....		1,004 91	
			1,345 51
SURVEYS .....			26,999 35
BOARD OF SURVEYORS .....			200 00
EXPERIMENTAL TREATMENT OF ORE .....			732 94
REFUNDS—Miscellaneous .....			14,697 63
CONTINGENCIES.			
<i>Departmental.</i>			
Printing and Binding .....	4,360 04		
Stationery .....	4,893 91		
		9,253 95	
Postage .....	2,266 20		
Express .....	158 55		
		2,424 75	
Telegraphing .....	379 88		
Car Fare .....	50 00		
		429 88	
Subscriptions .....	242 11		
Advertising .....	6,658 56		
		6,900 67	
Typewriters and Repairs .....		299 72	
Cunningham, E. A., services <i>re</i> investigation of S. ½ Lot 3, Con. 2, Melick.....	68 40		
Ferguson, Hon. G. H., travelling expenses.....	400 00		
Hutcheon, Jas. .... Disbursements..	730 40		
Ledger, W. R., travelling expenses .....	23 85		
MacLennan, Allan, services <i>re</i> investigation of S. ½ Lot 3, Con. 2, Melick.....	75 00		
Perron, Jos., services <i>re</i> inspection of dams, Lake Temagami .....	17 50		
Rorke, L. V., travelling expenses.....	75 32		
		1,390 47	
Extra Clerks .....	3,657 15		
Annual Fees .....	43 00		
Sundries .....	97 46		
		3,797 61	
			24,497 05
<i>Carried forward</i> .....			474,509 08



*Appendix No. 6.—Concluded.*

Service.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....					474,509	08
CONTINGENCIES.— <i>Concluded.</i>						
BUREAU OF MINES.						
Printing and Binding .....	1,247	80	3,174	15	8,942	20
Stationery .....	1,926	35				
Postage .....	478	72				
Telegraphing .....	94	65	2,549	17		
Express and Cartage .....	51	15				
Advertising .....	1,234	70				
Subscriptions.....	220	58	310	83		
Maps .....	469	37				
Gibson, T. W., travelling expenses .....	37	00				
Typewriters, repairs, etc. ....	132	75	2,908	05		
Addressograph Sales Co., Addressograph.....	141	08				
Nicholas, F. J., preparing index .....	1,756	15				
Rogers, W. R. .... Disbursements..	6	22	715	50		
Extra Clerks .....	877	73				
Sundries .....	267	95				
FORESTRY.						
Zavitz, E. J., travelling expenses .....	286	00	332	22		
Newman, F. S., travelling expenses .....	366	70				
White, J. H., travelling expenses .....	62	80				
Supplies .....	183	82	1,047	72		
Sundries .....	148	40				
					484,499	00

D. GEO. ROSS,  
Accountant.

ALBERT GRIGG,  
Deputy Minister of Lands and Forests.

*Appendix No. 7.*

Statement of Expenses on account of various Services under the direction of the Department of Lands, Forests and Mines, for the year ending October 31st, 1915.

Service.	\$ c.	\$ c.
ALGONQUIN PARK .....	27,577 23	
ALGONQUIN PARK, EXTINGUISHING SQUATTERS' CLAIMS . .	3,200 00	
ALGONQUIN PARK, CLEANING RIGHT-OF-WAY .....	4,607 15	
		35,384 38
QUETICO PROVINCIAL PARK .....	.....	13,443 88
VETERANS' COMMUTATION .....	.....	400 00
ROYAL NICKEL COMMISSION .....	.....	2,387 33
BOUNTY ACT VII., EDWARD VII., CAP. 14.		
Coniagas Reduction Co., Ltd. ....	18,397 50	
Deloro Mining and Reduction Co. ....	11,318 81	
Metals Chemical Co., Ltd. ....	1,308 72	
		31,025 03
		82,640 62

D. GEO. ROSS,  
Accountant.

ALBERT GRIGG,  
Deputy Minister of Lands and Forests.

*Appendix No. 8.*

## WOODS AND FORESTS.

Statement of revenue collected during the year ending October 31st, 1915.

	\$	c.
Amount of Western collections at Department.....	1,395,278	76
do Belleville collections       ".....	17,165	23
do Ottawa collections       ".....	115,660	83
	\$1,528,104	82

JOHN HOUSER,  
Chief Clerk in Charge.

ALBERT GRIGG  
Deputy Minister.



*Appendix No. 9.***PATENTS BRANCH.**

Statement of Patents, etc., issued by the Patents Branch from 1st November, 1914, to 31st October, 1915.

Public Lands (late Crown).....	587
“ “ (late School).....	21
“ “ (late Clergy Reserves).....	3
“ “ (University).....	10
Free Grant Lands (Act of 1913).....	403
“ “ “ (Act of 1901) (Veterans).....	235
Mining Lands.....	458
Mining Leases.....	51
Crown Leases.....	13
Licenses of Occupation.....	14
Temagami Leases.....	1
Sand and Gravel Leases.....	5
Total.....	1,801

CHARLES S. JONES,  
Chief Clerk.

ALBERT GRIGG,  
Deputy Minister.

## Appendix

## WOODS AND

## Statement of Timber and Amounts accrued from Timber Dues, Ground

## QUANTITY AND

Agencies.	Area covered by timber license.	Saw logs.			
		Pine.		Other.	
	Square miles.	Pieces.	Feet B.M.	Pieces.	Feet B.M.
Western Timber District .....	11,042 $\frac{1}{4}$	8,532,047	338,941,457	1,160,601	40,950,990
Belleville Timber District .....	670	97,803	1,572,734	152,987	7,242,209
Ottawa Timber District .....	3,999 $\frac{1}{2}$	676,061	43,404,643	288,673	6,475,703
	15,711 $\frac{3}{4}$	9,305,911	383,918,834	1,602,261	54,668,902

## General Statement

Agencies.	Cordwood.		Tan Bark.	Railway Ties.	Cedar Posts.	Poles.	Stave Bolts.	Pulpwood,
	Hard.	Soft.						
	Cords.	Cords.	Cords.	Pieces.	Cords.	Pieces.	Cords.	Cords.
Western Timber District .....	34,805	27,500	4,790	720,140	163	2,825	4,121	281,443
Belleville Timber District .....	4,143	.....	.....	1,819	8	599	.....	5,913
Ottawa Timber District .....	.....	1,420	.....	7,205	91	1,953	.....	13,705
	38,948	28,920	4,790	729,164	262	5,377	4,121	301,061

JOHN HOUSER,  
Chief Clerk in Charge.

No. 10.

FORESTS.

Rent and Bonus during the year ending 31st October, 1915.

DESCRIPTION OF TIMBER.

Boom and Dimension.				Square Timber.		Piling.		Cedar.
Pine.		Other.		Pine.		Tamarac.		
Pieces.	Feet B.M.	Pieces.	Feet B.M.	Pieces.	Cubic feet.	Pieces	± t.B.M.	Lineal feet.
178,389	19,692,639	18,539	2,150,944	5,090	266,949	2,785	559,601	659,480
649	71,281	4,477	838,693	.....	.....	.....	.....	.....
8,554	1,159,002	4,255	423,523	.....	.....	61	7,260	.....
187,592	20,922,922	27,271	3,413,160	5,090	266,949	2,846	566,861	659,480

of Timber.—Concluded.

Amounts accrued.

Transfer bonus.	Interest.	Trespass.	Timber dues.	Bonus.	Deposits timber sales	Ground rent.	Total.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,410 00	9,601 85	34,518 58	913,584 38	451,226 42	36,000 00	61,367 50	1,508,708 73
.....	88 86	1,099 49	11,754 82	419 13	.....	4,295 00	17,657 30
150 00	1,068 86	747 33	77,432 38	.....	.....	23,885 00	103,283 57
2,560 00	10,759 57	36,365 40	1,002,771 58	451,645 55	36,000 00	89,547 50	1,629,649 60

ALBERT GRIGG,  
Deputy Minister.



*Appendix No. 11.*

Statement of work done in the Military branch of the Department of Lands, Forests and Mines, during the year 1915.

References for Veteran Patents issued.....	192
Locations under military certificates.....	34
Certificates applied in payment of lands.....	21
Certificates surrendered for commutation money.....	8
Letters received.....	4,390
Letters written.....	4,050
Special letters to agents.....	580
Special letters to mining recorders.....	350
Maps and reports supplied to veterans.....	900
Printed forms sent out.....	400
Copies of Veteran Act supplied.....	120

H. E. JOHNSTON,  
Chief Clerk in Charge.

ALBERT GRIGG,  
Deputy Minister.

*Appendix No. 12.*

Statement of the number of Letters received and mailed by the Department in 1911-12, 1912-13, 1913-14 and 1914-15.

Year,	Sales and Free Grants.	Surveys.	Woods and Forests.	Mines.	Totals.	Names indexed.	Orders-in-Council.	Returned letters.	Letters, circulars and reports mailed from Department.
1911-12	20,050	10,150	7,700	8,750	50,407	57,000	150	76	63,125
1912-13	27,658	11,775	7,219	8,800	55,452	61,500	150	75	65,280
1913-14	25,023	11,100	8,598	8,200	52,921	59,000	125	60	64,000
1914-15	23,000	9,100	7,400	7,800	47,900	56,000	100	55	62,000

FRANK YEIGH,  
Registrar.

ALBERT GRIGG,  
Deputy Minister.

## Appendix No. 13.

Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties and of patents issued in Free Grant Townships during the year ending 31st October, 1915.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Baxter .....	Muskoka. ....	J. B. Brown, Bracebridge..	4	529	...	...	1	4
Brunel .....	"	"	3	250	...	...	3	2
Cardwell .....	"	"	6	871	1	327	3	3
Chaffey .....	"	"	3	299	...	...	1	1
Draper .....	"	"	1	102	...	...	1	...
Franklin .....	"	"	4	686	1	7	4	4
Freeman .....	"	"	1	100	...	...	...	2
Macaulay .....	"	"	1	100	...	...	1	2
Medora .....	"	"	1	200	2	4	2	9
Monck .....	"	"	...	...	...	...	...	...
Morrison .....	"	"	6	673	1	25	2	3
Muskoka .....	"	"	1	100	1	1	1	1
McLean .....	"	"	1	100	...	...	1	...
Oakley .....	"	"	8	1,093	1	1	8	3
Ridout .....	"	"	3	509	...	...	3	1
Ryde .....	"	"	3	501	1	24	3	2
Sherborne....	Haliburton....	"	3	374	2	76	1	3
Sinclair.....	Muskoka .....	"	3	374	4	79	4	9
Stephenson...	"	"	...	...	...	...	...	...
Stisted .....	"	"	...	...	1	101	...	2
Watt .....	"	"	...	...	...	...	...	2
Wood .....	"	"	4	966	9	38	...	16
Burpee .....	Parry Sound..	Miss I. M. Campbell, Parry	5	879	...	...	...	2
Carling .....	"	" Sound	15	2,411	1	43	11	6
Christie.....	"	"	1	97	...	...	...	5
Conger .....	"	"	2	294	2	5	2	8
Cowper .....	"	"	...	136	...	...	...	3
Foley .....	"	"	3	...	...	...	2	...
Ferguson ..	"	"	...	...	...	...	...	1
Hagerman ..	"	"	1	38	...	...	1	1
Harrison ..	"	"	...	...	1	2	...	8
Henvey .....	"	"	1	200	...	...	...	...
Humphrey ..	"	"	3	340	...	...	2	...
McConkey....	"	"	6	289	...	...	...	...
McDougall ..	"	"	1	100	...	...	1	2
McKellar ..	"	"	...	...	...	...	...	...
McKenzie ..	"	"	...	...	...	...	...	1
Monteith ..	"	"	5	704	...	...	6	1
Shawanaga ..	"	"	...	...	1	1½	...	7
Wilson .....	"	"	3	400	2	30	1	2
Chapman ....	Parry Sound .	Dr. J. S. Freeborn,	...	...	...	...	...	...
		Magnetawan	4	655	1	1	2	2
Croft .....	"	"	6	696	1	2	4	2
Ferrie .....	"	"	...	...	...	...	...	...
Gurd .....	"	"	4	647	1	20	3	2
Lount.....	"	"	1	200	...	...	1	...
Machar .....	"	"	5	640	...	...	4	1
Mills .....	"	"	5	689	1	15	1	2
Pringle .....	"	"	5	823	1	1	1	2

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Ryerson.....	Parry Sound..	Dr. J. S. Freeborn, Magnet- awan.	.....	.....	.....	.....	.....	.....
Spence .....	"	"	2	298	.....	.....	2	3
Strong .....	"	"	2	400	.....	.....	2	2
Armour .....	Parry Sound..	W. Jenkin, Emsdale. ....	1	208	.....	.....	1	1
Bethune .....	"	"	2	349	.....	.....	1	.....
Joly .....	"	"	28	2,783	1	1	14	.....
McMurrich ...	"	"	.....	.....	.....	.....	.....	2
Perry .....	"	"	.....	.....	.....	.....	.....	.....
Proudfoot ....	"	"	4	454	1	5	2	2
Hardy .....	Parry Sound..	H. J. Ellis, Powassan.. ....	.....	.....	1	15	.....	2
Himsworth ..	"	"	15	1,900	1	22	8	6
Laurier .....	"	"	1	100	1	27	1	4
Nipissing .....	"	"	13	1,761	2	3	10	5
Patterson.....	"	"	2	196	1	14	.....	1
Bonfield....	Nipissing ....	W. J. Parsons, North Bay...	29	3,150	1	6	12	9
Boulter .....	"	"	17	2,011	3	6	1	2
Chisholm .....	"	"	14	1,378	1	76	7	10
Ferris .....	"	"	12	1,106	1	2½	7	9
Anson .....	Haliburton ...	R. H. Baker, Minden.....	2	201	.....	.....	2	.....
Glamorgan ..	"	"	4	500	.....	.....	6	.....
Hindon .....	"	"	1	200	.....	.....	.....	.....
Lutterworth..	"	"	5	584½	1	5	4	2
Minden .....	"	"	3	295	.....	.....	1	2
Snowdon .....	"	"	7	901	.....	.....	5	1
Stanhope.....	"	"	.....	.....	.....	.....	.....	3
Anstruther ...	Peterboro'.	William Hales, Apsley .....	2	200	.....	.....	1	1
Burleigh, N.D.	"	"	.....	.....	1	2¾	.....	1
" S.D.	"	"	.....	.....	.....	.....	.....	.....
Chandos .....	"	"	.....	.....	.....	.....	.....	.....
Methuen .....	"	"	4	598	.....	.....	.....	.....
Cardiff .....	Haliburton ...	A. N. Wilson, Kinmount.....	8	1,079	.....	.....	4	.....
Cavendish....	Peterboro'....	"	2	176	.....	.....	3	.....
Galway .....	"	"	4	421	1	22	1	4
Monmouth ...	Haliburton ...	"	11	1,550	1	16	7	1
Bangor .....	Hastings .....	W. J. Douglas, Greenview...	3	512	.....	.....	4	1
Carlow .....	"	"	2	150	1	53	1	2
Cashel .....	"	"	.....	.....	.....	.....	.....	.....
Dungannon ..	"	"	8	935½	.....	.....	.....	5
Faraday .....	"	"	5	837	.....	.....	1	4
Herschel .....	"	"	13	1,549½	1	12	4	4
Limerick .....	"	"	.....	.....	1	2	.....	4
Mayo .....	"	"	2	146½	.....	.....	1	.....
Monteagle ..	"	"	5	550½	.....	.....	2	3
McClure .....	"	"	3	250	1	64	1	.....
Wicklow .....	"	"	4	508	2	100	2	4
Wollaston....	"	"	.....	.....	.....	.....	.....	1
Algona, S.....	Renfrew .....	Adam Prince, Wilno.....	.....	.....	.....	.....	.....	.....
Brougham ..	"	"	6	687	.....	.....	.....	1
Brudenell ...	"	"	2	161	.....	.....	.....	2
Burns .....	"	"	2	185	.....	.....	2	1



## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Grattan.....	Renfrew .....	Adam Prince, Wilno.....	.....	.....	.....	.....	2	4
Griffith .....	"	"	.....	.....	1	100	.....	1
Hagarty .....	"	"	3	300	.....	.....	1	1
Jones .....	"	"	1	100	.....	.....	.....	.....
Lyell .....	Nipissing ....	"	11	1,328	.....	.....	2	.....
Lyndoch .....	Renfrew .....	"	4	421	.....	.....	6	.....
Matawatchan..	"	"	3	462	.....	.....	.....	.....
Radcliffe ....	"	"	2	310	.....	.....	1	.....
Raglan .....	"	"	3	500	1	8	1	1
Richards ....	"	"	11	1,295	.....	.....	7	2
Sebastopol ...	"	"	2	300	.....	.....	.....	2
Sherwood ....	"	"	1	100	.....	.....	1	1
Algona, N....	Renfrew .....	Finlay Watt, Pembroke....	1	104	.....	.....	.....	1
Alice .....	"	"	2	298	.....	.....	2	2
Buchanan ....	"	"	3	397	1	45	.....	.....
Fraser .....	"	"	2	200	2	5 $\frac{1}{2}$	.....	3
Head .....	"	"	.....	.....	.....	.....	.....	.....
Maria .....	"	"	.....	.....	.....	.....	.....	.....
McKay .....	"	"	.....	.....	.....	.....	.....	.....
Petawawa ....	"	"	5	554	.....	.....	1	.....
Rolph .....	"	"	8	875	1	100	2	.....
Wilberforce ..	"	"	.....	.....	.....	.....	.....	1
Wylie (pt)....	"	"	5	497	.....	.....	.....	1
Calvin .....	Nipissing ....	Robert Small, Mattawan ...	4	450	.....	.....	6	1
Cameron (pt)..	"	"	10	1,085	1	41	.....	1
Lauder ....	"	"	4	536	1	12	.....	3
Mattawan.....	"	"	.....	.....	.....	.....	.....	.....
Papineau ....	"	"	10	952 $\frac{1}{2}$	.....	.....	9	2
Korah .....	Algoma .....	Edw'd Noble, Sault Ste. Marie	.....	.....	.....	.....	.....	2
Parke.....	"	"	.....	.....	.....	.....	.....	.....
Prince.....	"	"	4	574	.....	.....	3	1
Aberdeen ....	Algoma .....	Thos. Dodds, Thessalon....	.....	.....	.....	.....	.....	.....
" add.	"	"	1	159	.....	.....	.....	1
Galbraith....	"	"	.....	.....	2	7 $\frac{1}{2}$	.....	4
Lefroy .....	"	"	.....	.....	.....	.....	.....	.....
Plummer ....	"	"	.....	.....	.....	.....	.....	.....
" add.	"	"	.....	.....	.....	.....	.....	.....
St. Joseph Is'd	Algoma .....	W. E. Whybourne, Marksville	13	1,270	1	$\frac{3}{4}$	12	.....
Baldwin.....	Algoma .....	Edward Arthurs, Espanola .	.....	.....	.....	.....	.....	.....
Merritt.....	"	"	5	703	.....	.....	3	2
Blake.....	Thunder Bay.	W. A. Burrows, Port Arthur	17	2,637	.....	.....	15	3
Conmee .....	"	"	14	1,906 $\frac{3}{4}$	3	14	10	15
Crooks .....	"	"	13	1,734 $\frac{1}{2}$	1	32	7	.....
Dawson Road.	"	"	21	2,135 $\frac{1}{2}$	2	72	16	.....
Dorion .....	"	"	8	1,338 $\frac{1}{2}$	1	44	5	5
Gillies .....	"	"	1	155 $\frac{1}{2}$	2	15	1	7
Gorham .....	"	"	27	3,918 $\frac{1}{4}$	1	63 $\frac{1}{2}$	11	14
Lybster .....	"	"	4	645 $\frac{1}{2}$	2	187	5	1
Marks.....	"	"	12	1,867	.....	.....	4	4
McGregor ....	"	"	20	3,199	1	7	17	2
McIntyre ....	"	"	1	28	1	2	1	3
O'Connor.....	"	"	3	475	2	103	2	13

## Appendix No. 13.—Continued.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Oliver.....	Thunder Bay.	W. A. Burrows, Port Arthur	2	317	1	2	2	9
Paipoonge, NR	"	"	...	...	...	...	...	...
" SR	"	"	...	...	...	...	...	6
Pardee.....	"	"	7	1,120	1	485	1	1
Pearson.....	"	"	39	6,330	1	14	22	11
Scoble.....	"	"	18	2,318	1	1 $\frac{1}{2}$	13	2
Stirling.....	"	"	53	7,938	3	175 $\frac{1}{2}$	61	...
Strange.....	"	"	3	472 $\frac{1}{2}$	...	...	7	3
Ware.....	"	"	38	5,469	1	51 $\frac{1}{2}$	27	12
Atwood.....	Rainy River.	William Cameron, Stratton..	...	...	...	...	...	...
Blue.....	"	"	5	764	4	7 $\frac{1}{2}$	5	7
Curran.....	"	"	2	322	2	6	2	1
Dewart.....	"	"	9	1,480	1	80	10	2
Dilke.....	"	"	...	...	1	16	...	4
Morley.....	"	"	3	323	2	7	3	3
Morson.....	"	"	24	3,195	5	156	22	1
McCrosson...	"	"	3	471	1	1	3	1
Nelles.....	"	"	6	880	1	82	7	1
Pattullo....	"	"	11	1,302 $\frac{1}{2}$	6	54	5	7
Pratt.....	"	"	5	839 $\frac{1}{2}$	2	21	5	1
Rosebery...	"	"	...	...	...	...	...	...
Shenston....	"	"	1	81	1	4	...	2
Sifton.....	"	"	14	2,170	7	320 $\frac{1}{2}$	9	5
Spohn.....	"	"	19	2,833 $\frac{1}{2}$	7	169	11	2
Sutherland...	"	"	9	1,419 $\frac{1}{2}$	2	124 $\frac{1}{2}$	8	1
Tait.....	"	"	9	1,290	3	81 $\frac{1}{2}$	6	6
Tovell.....	"	"	11	1,713 $\frac{1}{2}$	2	9	8	5
Worthington..	"	"	...	...	...	...	...	2
Aylsworth...	Rainy River.	Alex. McFayden, Emo.....	1	40 $\frac{1}{2}$	...	...	...	2
Barwick.....	"	"	5	872 $\frac{1}{2}$	1	...	4	1
Burriess...	"	"	1	178	3	39	1	7
Carpenter...	"	"	2	262	1	4	1	11
Crozier.....	"	"	17	2,733 $\frac{3}{4}$	1	2	12	2
Dance.....	"	"	2	245	1	2	...	5
Devlin.....	"	"	2	494	3	58	3	4
Dobie.....	"	"	2	321	...	...	2	6
Fleming.....	"	"	6	960 $\frac{1}{2}$	1	1	6	3
Kingsford...	"	"	4	448 $\frac{1}{2}$	1	3 $\frac{3}{4}$	3	1
Lash.....	"	"	16	835	1	11	5	7
Mather.....	"	"	4	641 $\frac{1}{2}$	1	1 $\frac{1}{2}$	4	1
Miscampbell.	"	"	5	817	3	19 $\frac{1}{2}$	6	6
Potts.....	"	"	12	1,942 $\frac{1}{2}$	...	...	5	4
Richardson...	"	"	...	...	...	...	...	...
Roddick.....	"	"	...	...	...	...	...	...
Woodyatt....	"	"	...	...	...	...	...	...
Aubrey.....	Kenora.....	J. E. Gibson, Dryden.....	8	1,054 $\frac{1}{2}$	...	...	3	6
Britton.....	"	"	6	955 $\frac{1}{2}$	...	...	6	1
Eton.....	"	"	13	1,852	...	...	10	1
Langton.....	"	"	8	1,222	...	...	2	...
Melgund.....	"	"	5	624 $\frac{1}{2}$	1	3	5	2
Mutrie.....	"	"	8	1,326 $\frac{1}{2}$	2	109	3	1
Redvers.....	"	"	...	...	...	...	...	...
Rowell.....	"	"	3	470	...	...	...	1
Rugby.....	"	"	8	1,200	1	59	...	5
Sanford.....	"	"	6	724	...	...	3	4
Southworth..	"	"	8	974 $\frac{1}{2}$	...	...	7	4
Temple.....	"	"	7	1,094 $\frac{1}{2}$	2	18 $\frac{1}{2}$	6	1

## Appendix No. 13.—Concluded.

Township.	District or County.	Agent.	No. of persons located.	No. of acres located.	No. of purchasers.	No. of acres sold.	No. of lots resumed.	No. of patents issued.
Van Horne ...	Kenora .....	J. E. Gibson, Dryden...	10	1,148 $\frac{1}{2}$	1	76	5	6
Wabigoon ....	"	"	13	2,063	2	63 $\frac{1}{2}$	11	1
Wainwright ..	"	"	6	892	...	...	7	4
Zealand .....	"	"	38	5,927	6	359	12	2
Melick .....	Kenora .....	W. L. Spry, Kenora .....	16	2,433 $\frac{1}{2}$	1	19	12	1
Pellatt .....	"	"	12	1,667	2	62	5	2
Blezard .....	Sudbury .....	J. A. Lemieux, Blezard	2	227 $\frac{3}{4}$	1	1 $\frac{1}{2}$	...	4
Capreol .....	"	" Valley	1	144	1	31	1	5
Hanmer .....	"	"	4	226 $\frac{1}{4}$	...	...	1	4
Lumsden .....	"	"	3	398	...	...	...	1
Balfour .....	Sudbury .....	J. K. MacLennan, Sudbury ..	3	453	...	...	2	6
Broder .....	"	"	8	1,147 $\frac{1}{2}$	4	89	6	4
Chapleau .....	"	"	...	...	...	...	...	...
Dill .....	"	"	39	5,993 $\frac{1}{2}$	1	1	5	3
Garson .....	"	"	10	1,534	1	130	3	3
Morgan .....	"	"	1	155 $\frac{1}{2}$	...	...	...	1
Neelon .....	"	"	1	160	2	121	...	2
Rayside .....	"	"	3	304 $\frac{1}{2}$	...	...	...	...
Appelby .....	Sudbury .....	Emile Langlois, Warren .....	7	1,114 $\frac{1}{2}$	2	9 $\frac{1}{2}$	2	3
Casimir .....	"	"	4	606	...	...	2	1
Dunnet .....	"	"	6	919 $\frac{1}{2}$	1	1	...	3
Hagar .....	"	"	4	639	...	...	2	2
Jennings .....	"	"	1	160	...	...	1	1
Kirkpatrick ..	Nipissing ...	"	2	527 $\frac{1}{2}$	1	32	1	3
Ratter .....	Sudbury .....	"	4	660	...	...	...	4
Caldwell .....	Nipissing ...	J. A. Pillion, Sturgeon Falls.	11	1,475	3	107	2	4
Cosby .....	Sudbury .....	"	4	624 $\frac{1}{2}$	...	...	...	4
Grant .....	Nipissing .	"	6	751	...	...	2	2
Macpherson ..	"	"	13	1,961 $\frac{1}{2}$	...	...	2	6
Marland .....	Sudbury .....	"	6	881	...	...	...	3
Springer .....	Nipissing ...	"	2	328	1	58	1	3
Abinger .....	Lennox and Addington	Charles Both, Denbigh .....	2	213	...	...	4	...
Canonto, S. ...	Frontenac...	"	...	...	...	...	...	...
" N. ...	"	"	...	...	...	...	...	...
Clarendon ...	"	"	1	98	...	...	1	2
Denbigh. . .	Lennox and Addington	"	5	688	...	...	4	1
Miller (pt.) ...	Frontenac...	"	...	...	...	...	...	2
Palmerston	"	"	...	...	...	...	...	...
McClintock ...	Haliburton...	Unattached .....	...	...	3	32 $\frac{3}{4}$	...	3
Airy .....	Nipissing .....	"	4	411	...	...	1	...
Finlayson .....	"	"	...	...	2	31	...	3
Murchison ...	"	"	3	204	...	...	...	1
Sabine .....	"	"	8	1,298	...	...	2	3
			1355	185,020 $\frac{1}{2}$	200	5,513 $\frac{1}{2}$	785	621
			No. of lots assigned		No. of acres assigned			
			133		17,466 $\frac{1}{2}$			



*Appendix No. 14.*

Statement of Municipal Surveys for which instructions issued during the 12 months ending October 30th, 1915.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.
1	E. R. Bingham.	695	Nov. 26th, 1914	To survey a portion of the City of Port Arthur, in the District of Thunder Bay, between John Street and McVicar and River Streets, and between Algoma and High Streets, being the balance of what was known as the old town plot of Prince Arthur's Landing, and to have the corners of all the streets marked by iron bars, duly planted thereat.
2	H. J. Beatty...	696	Mar. 23rd, 1915	To survey part of the boundary line dividing the Townships of Wilberforce and Stafford, commencing at the 20th concession of Wilberforce and ending at the town line of Alice, and to plant stone or other durable monuments at the front and rear angles of the concession roads above mentioned in the Township of Wilberforce.
3	W.G. McGeorge	697	Mar. 24th, 1915	To survey the concession line between Concessions II. and III., in the Township of Harwich, from Lot No. 3 to the waters of the Rond Eau, and to plant stone or iron monuments on each side thereof.
4	George Smith.	698	June 2nd, 1915	To survey the road allowance between concessions VIII. and IX., in the Township of Fenelon, across broken lot No. 11, or as much farther on either side as may be required to find an original monument, and to plant stone or other durable monuments at the angles of the lots.
5	Jas. J. MacKay	699	June 21st, 1915	To survey the limits of Mountain Park Avenue, in the City of Hamilton, from the west side of Wentworth Street to Lakeview Avenue, and of Wentworth Street from the allowance for road between the 3rd and 4th concessions of the Township of Barton and the brow of the mountain, now in the City of Hamilton, and to plant durable monuments showing the northerly and southerly boundaries of Mountain Park Avenue between Wentworth Street and Lakeview Avenue, and the easterly and westerly boundaries of Wentworth Street between the allowance for road between the 3rd and 4th concessions of the Township of Barton, and the brow of the mountain.
6	Geo. A. McCubbin .....	700	June 22nd, 1915	To survey the line in the Township of Zone, from between the 3rd and 4th concessions across concessions 4, 5 and 6, to the Longwoods Road and to mark the said line by permanent monuments.
7	S. B. Code.....	701	July 2nd, 1915	To survey the 6th concession line from Lot No. 25, at the side road to Lot No. 18, in the Township of Goulburn, and to have durable monuments planted at the corners of the above lots.

*Appendix No. 14.—Concluded.*

Statement of Municipal Surveys for which instructions issued during the 12 months ending October 31st, 1914.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.
8	J. L. Morris...	702	Sept. 2nd, 1915.	To survey the concession line between concessions 8 and 9, opposite lots numbers 1, 2 and 3, in the Township of Westmeath, in the County of Renfrew, or as much farther as may be necessary on either side, and to mark the same by permanent stone or other durable material.
9	F. M. Eagle-son .....	703	Oct. 15th, 1915.	To survey part of the Concession Road Allowance between the 6th and 7th concessions of the Township of Kenyon, from the east side of Lot No. 7 to the west side of Lot No. 12, and also of the road allowance between lots numbers 6 and 7 in the 7th concession, and to plant durable monuments to define said road allowances opposite the above lots.
10	J. J. MacKay..	704	Oct. 22nd, 1915.	To survey the road allowance between the broken front and the first concession of the Township of North Grimsby, from the easterly limit of the said township of North Grimsby to the allowance for road between lots numbers 6 and 7 in the first and broken front concessions, and that durable monuments be planted defining the limits of the 66 foot reservation for a highway between the said broken front and the first concession of the township of North Grimsby from the easterly limit of the said township to the allowance for road between lots numbers 6 and 7 in the first and broken front concessions.

GEORGE B. KIRKPATRICK,  
Director of Surveys.

Deputy Minister of Lands and Forests.

*Appendix No. 15.*

Statement of Municipal Surveys confirmed during the 12 months ending October 30th, 1915.

No.	Name of Surveyor.	No.	Date of Instructions.	Description of Survey.	Date when confirmed under R.S.O. 1897, Chap. 181, secs. 10-15, inclusive
1	E. R. Bingham..	691	April 7, 1914	To survey certain streets in the City of Port Arthur in the District of Thunder Bay, including North and South Water Streets, Cumberland Street, Court Street and Algoma Street and all intersecting streets between John Street and McVicar Street, and to have the corners of the streets marked by iron bars duly planted thereat.	June 14, 1915
2	A. S. Campbell...	692	April 9, 1914	To survey the road allowance between the 3rd and 4th concessions south of the base line in the Township of Wolfe Island in the County of Frontenac, across lots 8, 9 and 10, or as much further on either side as may be necessary to find an original post and to plant durable monuments at the angles of the above lots.	May 6, 1915
3	Speight & Van Nostrand..	693	May 20, 1914	To survey part of the town plot of Port Credit in the County of Peel, lying southwest of the River Credit and northeast of Joseph Street in the said village, and to plant stone or other durable monuments at the front and rear angles of the blocks lying in that part of the village, as shown on annexed plan, pursuant to the provisions of the Surveys Act.	Jan. 7, 1915
4	W. J. Moore.....	694	July 24, 1914	To survey the road allowance between concessions two and three, in the Township of Ross, from the proof line between lots ten and eleven southeasterly to Olmstead Lake, and to mark said road allowance by permanent monuments.	Nov. 4, 1914
5	George Smith....	698	June 2, 1915	To survey the road allowance between concessions VIII and IX in the Township of Feneelon, across broken Lot No. 11, or as much farther on either side as may be required to find an original monument, and to plant stone or other durable monuments at the angles of the lots.	Sept. 1, 1915

GEORGE B. KIRKPATRICK,  
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Deputy Minister of Lands and Forests.



*Appendix No. 16.*

Statement of Crown Surveys in progress during the 12 months ending October 30th, 1915.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount Paid.	
				\$	c.
1	Sept. 15, 1915	E. R. Bingham..	Subdivision of the Township of Owens, District of Timiskaming .....	1,000	00
2	Sept. 7, 1915	M. E. Crouch....	Survey of the outlines of certain townships in the District of Algoma.....	.....	.....
3	Oct. 15, 1915	R. S. Code.....	Survey of a tie line in the vicinity of Kowkash, District of Thunder Bay.....	500	00
4	Apr. 15, 1915	Jas. S. Dobie....	Survey of islands in the Georgian Bay of Lake Huron, Districts of Algoma and Manitoulin .....	5,000	00
5	July 9, 1915	C. H. Fullerton..	Subdivision of the Township of Cody, District of Timiskaming .....	500	00
6	Oct. 23, 1915	J. W. Fitzgerald..	Subdivision of a portion of land in the vicinity of Ramsay Station, C. P. Ry., District of Sudbury .....	500	00
7	Sept. 7, 1915	Lang & Ross....	Survey of certain outlines of townships in the District of Algoma .....	.....	.....
8	Apr. 20, 1915	Lang & Ross....	Survey of islands on the North Shore of Lake Huron and the Georgian Bay, in the Districts of Manitoulin, Sudbury and Parry Sound .....	4,500	00
9	Aug. 10, 1915	Phillips & Benner.....	Subdivision of the Township of Forbes in the District of Thunder Bay .....	2,000	00
10	Apr. 16, 1915	T. J. Patten.....	Survey of islands in Lake Huron east and northeast of Manitoulin Island, in the District of Manitoulin .....	3,700	00
11	June 24, 1915	A. L. Russell....	Survey of certain lands north of the Townships of Ware, Gorham and MacGregor, in the District of Thunder Bay.....	1,500	00
12	July 27, 1915	E. Seager.....	Subdivision of the Township of Colenso, in the District of Kenora .....	1,000	00
			<b>Total</b> .....	<b>20,200</b>	<b>00</b>

GEORGE B. KIRKPATRICK,  
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Deputy Minister of Lands and Forests.

*Appendix No. 17.*

Statement of Crown Surveys completed and closed during the 12 months ending October 30th, 1915.

No.	Date of Instructions.	Name of Surveyor.	Description of Survey.	Amount paid.	No. of Acres.
1	June 7, 1912.	G. L. Brown....	Survey of the Township of Mc-Millan, District of Algoma .....	\$ c 679 60	51,796
2	Oct. 15, 1914.	E. R. Bingham..	Subdivision of the Township of Upsala, in the District of Thunder Bay .....	2,781 35	23,061
3	July 8, 1914..	E. R. Bingham..	Subdivision of part of the Township of Fraleigh, in the District of Thunder Bay .....	398 33	8,170
4	July 28, 1914..	Phillips & Benner.....	Subdivision of the Township of Jacques, in the District of Thunder Bay .....	919 72	24,207
5	July 22, 1914..	A. McMeekin....	Subdivision of the Township of Redvers, in the District of Kenora .....	1,440 00	23,976
6	July 30, 1915..	H. M. Anderson.....	Survey of timber in the Township of Notman, in the District of Nipissing .....	247 37	.....
7	Nov. 14, 1914..	J. R. Gill.....	Survey of a line across the Township of Beaumont, District of Sudbury .....	332 98	.....
8	Sept. 7, 1915.	McAuslan & Anderson.....	Survey of S. and E. boundaries of Nassau and south boundary of Storey, District of Algoma .....	.....	.....
				6,799 35	131,210

GEORGE B. KIRKPATRICK,  
Director of Surveys.

Deputy Minister of Lands and Forests.

*Appendix No. 18.*

## SURVEY OF THE TOWNSHIP OF McMILLAN, IN THE DISTRICT OF ALGOMA.

MORRISBURG, Ontario, February 10th, 1914.

SIR,—In accordance with your instructions bearing date June 8th, 1912, I beg to report on the survey of the township of McMillan in the district of Algoma.

I left Ottawa Friday, June 21st, accompanied by one assistant, one chainman, a cook and eight axemen. Two assistants who were to have joined me here failed to put in an appearance. Upon my arrival at Cochrane I was joined by two additional chainmen so that on Wednesday, June 26th, I started for the township of McMillan with a party of thirteen, where we arrived on the 27th.

We proceeded southward along our east boundary with camp equipment and supplies to the south-east corner of the township, where I found an eight-inch tamarac post planted by O.L.S., T. B. Speight, marked McMillan on the north-west side, Gill on the north-east side and IXM. on the north side, and aside of this an iron post one and three-quarters of an inch in diameter.

From this point having marked the iron post with the letter R. on the north, south, east and west sides, and taken an observation I started the south boundary of the township on a course west astronomically. This line I ran for a distance of nine miles and from its western extremity, after taking an observation, I ran the west boundary of the township on a course north astronomically.

Upon the south boundary after laying off fifty links for half the road allowance between the townships of Gill and McMillan, I planted posts giving each lot a width of twenty-five chains and twenty-five links, except lot 28 to which I gave a width of thirty-three chains and twenty-five links, making due allowance for a road one chain in width between lots 6 and 7, 12 and 13, 18 and 19, and 24 and 25. I also planted a post fifty links north of each of the said posts to indicate the south-east and south-west corners of the lots in the first concession.

I took observations at the intersections with the south boundary of the centre lines of the road allowance between lots 6 and 7, 12 and 13, 18 and 19, and 24 and 25, and ran a line north astronomically from each of these intersections, planting on the line between lots 12 and 13 a post every one hundred and twenty chains. From these posts I ran the concession lines that were to be run, east and west to intersect the eastern and western boundaries.

Owing to the extremely wet weather and the quitting of my entire party I was forced to suspend operations for the season and store my camp equipment, leaving about one-third of the work still to perform. On my return to the township to resume work last August I found that my entire equipment had been stolen, but, although seriously handicapped, I proceeded and eventually finished the survey.

The Township of McMillan is a level plain through which passes the Negagami river, entering the township on lot 23 in the first concession and being joined by the Negagamisee or White river on lot 4 11th concession. A striking peculiarity of these rivers is the great depth of the river bed below the level of the country through which the river passes. They are both shallow and swift and have many rapids.

The township is fairly well timbered with spruce, balsam, poplar, balm-of-gilead, white birch and cedar, but the trees are for the most part only of medium size and portions of the township give evidence of having, years ago, been fire swept while the western part has been comparatively recently burnt over.



The soil is exceedingly good, being clay with a thin overlay of vegetable mold or muck. I found that invariably the presence of balm-of-gilead and poplar timber indicated good clay soil with little or no muck on the surface. At the camp of the divisional engineer of the Transcontinental Railway on lot 5, in the 7th concession, there were grown during the season of 1912 one of the finest crops of potatoes I have ever seen. Owing to the many hours of daylight in the summer months they grew rapidly and matured early. In this garden were to be found also radishes, lettuce, peas, beans, onions, etc., all of exceptionally good quality.

There are to be found in this township moose, red deer, beaver, otter, martin, mink and muskrat, rabbits without number and plenty of partridges, while all the streams abound with speckled trout.

In conclusion I beg to say that in my opinion this township is an ideal one for location of settlers as it possesses advantages and facilities for immediate settlement, that other townships not so fortunately situated, have been years in securing. The Transcontinental Railway crosses the township in a north-westerly direction giving immediate access to as fine agricultural lands as are to be found in this whole section of country. The Negagami river traversing this township from south to north gives a ready means of transporting logs to the railway, and the construction of roads in pursuance with the wise policy of the Ontario Government in that behalf will give settlers in this township transportation facilities that are not available in some of the older townships.

I have the honour to be, Sir,

Your obedient servant,

(Signed) GEO. L. BROWN,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

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*Appendix No. 19.*

SURVEY OF THE TOWNSHIP OF UPSALA IN THE DISTRICT OF THUNDER BAY.

FORT WILLIAM, Ontario, December 8th, 1914.

SIR,—I beg to submit the following report on the subdivision of the Township of Upsala in the District of Thunder Bay.

Immediately upon receipt of my instruction I proceeded to the station of Upsala, Ontario on the Canadian Pacific Railway about 83 miles west of the city of Fort William. Pursuant to instructions, I commenced my survey at the iron bar planted by O.L.S. Stewart on the right-of-way of the Canadian Pacific Railway. This iron bar was calculated to be 422.151 chains from the south-west angle of the said township. From this iron bar I ran east astronomically 57 chains 84.9 links, and at this point established the south-east angle of the township. From the same iron bar I ran west astronomically to intersect the line (produced) run to

mark the west limit of the said township. From the points designated on the projected plan forwarded to me I ran lines north astronomically for a distance of 6 miles.

I run the west limit of the township I was instructed to commence at the iron bar planted by O.L.S. Stewart on the right-of-way of the Canadian Pacific Railway near Hay lake and to run north astronomically from this point. This iron bar could not be found nor any trace of the line as run by O.L.S. Stewart. The country through which it had been run has since that time been burnt over and the line could not be found except for a few chains length at the southerly end of same. Having intersected this line produced, as stated above, I then ran north astronomically from this point 6 miles more or less. In running this line I had my men looking for traces of the old line but as stated above it was not to be found.

My instructions read to run my east limit of the township north astronomically from the south-east angle of the township as established by me. This I started to do but found that the said line ran along a long lake as seen from the field notes and plan. Off this east limit I had been instructed to run lines west astronomically. To do this would have involved great difficulties due to the lake aforesaid. It then seemed advisable to run the front of the concessions off one of the meridian lines in the centre of the township. I then chose the meridian that seemed to afford the best chainage that the front of the meridians might be run at the most accurate chainage possible. It seemed advisable, therefore, to turn off the line between lots 8 and 9 and this was accordingly done, having first taken an observation on this line. Particular care was taken in the chainage along this meridian. Lines marking the front of the several concessions were then run off this line to intersect the west limit of the township and later to intersect the east limit of the township. This east limit was run later on over the ice. As seen from the plan and field notes this work checked. Although the front of the concessions were therefore run slightly contrary to instructions as issued to me, they are seen to check as well, if not better than they would have done had they been run in the manner set forth in my instructions.

As seen from the plan, the depth of concession I is 79 chains while the depth of concession II is 81 chains. In explanation of this I beg to state that on this survey I had with me chainmen who have worked with me for years and I had every reason to believe that I could trust to them to chain in a proper manner. In some most unaccountable manner, in chaining along the east limit of the township they made an error of one chain and this error was not picked up until over four miles of line had been cut and also blazed. It was, therefore, impossible to correct this error in any good manner so I took the liberty of throwing an extra chain's length in the depth of the second concession, that the township might have its full depth of 6 miles. I regret this error exceedingly, but, as I have stated, I did not have green men with me but men who have been with me on this class of work for years and in whom I had every confidence.

In marking the limits of the lots in this township particular attention was paid to the blazing of the lines and I feel confident that your instructions have been followed to the letter in this respect as well as in the manner of the posts, which in all but two cases were of spruce or jack pine and were of the size stated in the instructions and well marked. Where designated in the instructions, I have planted iron posts alongside the wooden posts marking them in the required manner and taking bearing trees as instructed.

As seen from the plan there are many lakes in this township, most of them being quite deep and clear. The fishing in the larger ones is said to be very good

although my party had no opportunity to test this, due to the lateness of the season. The township is overrun with moose, great numbers of them being seen. There are a few red deer and caribou but not in any great numbers. Partridge were rather scarce, but there were great numbers of rabbits. As seen from the field notes, the only rock formations met with in this survey were granite and there were no economic minerals met with.

According to instruction I traversed the lakes included in this township in the required manner, and enclose with the plan and field notes, notes and separate plans of this work. The only river met with in the survey of the township was the Fire Steel river which was not of sufficient size to warrant a separate survey being made of it. As seen from the traverse notes, the lines of the traverse were connected with the lines marking the lots, according to the written instructions.

Due to the lateness of the season there was considerable frost met with in planting the posts, but in all cases that I personally saw the posts were driven through the frost and seemed to be very well planted. I will, however, if the Department so desires it, send a man throughout the township in the spring to go over the lines and ascertain if the posts are well planted. As stated above the posts were in good condition at the time of the survey, but is it possible that the frost will have moved them a little.

With regard to the soil in this township the south-east part of this township has good clay soil. In going westwards along the southern part of the township this changes to a light sandy soil and at the south-west part of the township it is quite rocky. The central part of the township has a light soil with clay in the small valleys. The west-central part is of a granite formation which runs for two or three lots east-wards from the west limit of the township. The northern part of the township is rocky except at the eastern end where the sandy soil is again met with. An estimate of the portion of the township suitable for agricultural purposes would place it at about 70 per cent., the better part of this being in the eastern and southern parts of the township.

The only improvements made in this township are at the old siding of Upsala. There is one settler on lot 3, concession II, but he has made no improvements on the land. At the time I left the township there were several men going into the township to look it over with an idea of settling there. I have had several inquiries at this office as to when the Department would be putting this land in the hands of the Crown Land agents. Furthermore, I understand from Mr. Burriss, the Crown Land agent in Port Arthur that he has had many inquiries from people living in that district near Upsala with regard to this same matter.

I beg to enclose plan and field notes, traverse notes and separate plans of the lakes traversed, chainmen's affidavits, statements, etc., according to instructions, and I trust that this report and this work will meet with your approval.

I have the honour to be, Sir,

Your obedient servant,

(Signed) E. R. BINGHAM,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ontario.



*Appendix No. 20.*

## SURVEY OF THE TOWNSHIP OF REDVERS, IN THE DISTRICT OF KENORA.

KENORA, Ontario, December 4th, 1914.

SIR,—Under instructions dated July 22nd, 1914, I proceeded to Quibell to subdivide the township of Redvers, abutting Wabigoon township on the north. I left Kenora Friday, August 22nd, on steamer Kathleen, which during the summer months plies the scenic Winnipeg river, between Kenora and Minaki. It is a delightful trip of two and a half hours. On nearing Minaki, now a reputable summer resort, one must see the flying flags upon the gay cottages and the noisy motor launch. The future of this resort is assured, since the Grand Trunk Pacific has built a commodious and luxurious inn. Leaving Minaki on the local, we arrived at Quibell on time. A throng of people hung idly about the station waiting for their mail. A wonderful change has taken place here in three years. Houses, barns, good roads, tilled lands, a general store, a blacksmith shop confront you as you step off the train. The settlement of Wabigoon, like our towns of the West, was the trick of a night and a day. The fine new school is an index to the temper of the people; the teacher receives a fair salary.

On Saturday morning I moved out to Black Bluff lake. Seven men accompanied me. The country did not inspire me, as we toted our supplies over the barren hills rough and steep. It was an ideal camping place for we were sheltered and had good water.

On Sunday night I took an observation of Polaris at eastern elongation. On Monday morning I started west towards the river from post marked 2 miles planted in the easterly limit of Redvers township about ten chains north of said lake. From my camp here I ran all my lines to the river, excepting those in the far north. Having cut out these lines I moved along the third concession to the other side of the river Wabigoon. I then made this my home for a couple of weeks or more pushing the lines north and west from the river. Had I moved camp down the river I would have saved at least a week of time. Experience always teaches those willing to learn. The water was low and very few creeks were running when we started work, but we soon encountered a hindrance, the continuous wet weather which kept back the work perceptibly.

I next moved camp to Long lake, still adhering to the third concession. Part travelled by trail, part by canoes. We were near the east end of the lake and a little south. From here a road ran into Quibell, but some parts were very wet. Still, it was shorter than the canoe trail to bring in supplies. I purchased half of my supplies at Kenora, the rest at Quibell.

In some ways the township was admirably suited for subdivision, at times sights of nearly half a mile being possible. The greatest hindrance was the dominant windfall that always lay in our path. To increase the difficulty young half dry jack pine bitten by mice and rabbits stood thick as grain. The axemen could have no freedom and it was trying on the temper. At times in returning home it took us fully half an hour to compass a mile. Still I carried all of my men through without a hitch. A favorable condition was the absence of extensive marshes.

At my second camp Mr. Hutcheon visited me in his official capacity. He in a generous manner pointed out my errors or rather omissions which I readily corrected. I spent two or three days in placing new posts and reblazing some of my lines.

I secured the services of Mr. Geoffrey C. Tothill to assist in the traverse work. He did all except Black Bluff and Long lakes, which I did myself. I found no difficulty in retracing the outlines of the township except the southerly limit where in places only scrub existed, it was extremely difficult. In closing the line at the north-west of Wabigoon the last part of the line lying between the Hutchinson river and Bowden lake was not a continuation of the line east of the river. That accounts for the drawing showing the line to travel north-westerly. My posts and lines are now first-class and reflect the coaching I received from Mr. Hutcheon.

The township is hilly with ridges running in every conceivable direction. It appears to lack uniformity of arrangement. It is composed of numerous unrelated eminences, that are invariably clothed with jack pine, unless they are bare.

The creeks are very small, but have very good water and appear to run in all directions endeavouring to elude the innumerable rock masses, none of which stand out eminently above each other. The valleys are erratic and not very large.

The Wabigoon river is guarded on either side by rock ridges that are not very high, averaging I suppose 50 to 60 feet. Its average depth is about six feet in the centre, but the sides are shallow and filled with small rocks. The lower end of the river contains considerable masses of weeds. Insipid is the proper word to give to the water when drinking it, due to the presence of sulphite or other ingredients obtained at the pulp mill at Dryden.

All of us found it a distinct laxative, and some a source of annoyance. The river possesses a slow current and the two rapids are passable either way, but boulders revealed themselves in the low water. The water possesses a clay color, due to its upper reaches passing through clay banks. We caught no fish in the river with the troll, but jack fish, pickerel and cat fish are quite abundant in places. The river could only be traversed with portable motors, unless the rapids were rid of the boulders. The river is quite uniform and does not change rapidly in form. No bays of any size are found along its course.

Clay lake occupies the north-west portion of the township. It is semi-clear pleasant to the taste and contains a few islands that are mostly rocky. Bowden lake occupies the south-west part and extends itself north into Red Pine lake, thence easterly into Long lake. A few unimportant creeks run into these basins. With Yellow lake, these all drain off by Hutchinson creek into the Wabigoon river.

An Indian trail runs from Red Pine lake across to Clay lake, being a narrow Indian trail.

I encountered very little good timber in my survey. The only timber I saw of any commercial value was around Clay lake and Yellow lake. Mostly jack pine and spruce with small swamps of tamarac compose the marketable timber. On the east side of the Wabigoon no timber of any value did I see. In fact, not enough even for building purposes can be found. In a few places cordwood could be made. There is on the north side of the river a strip of good timber running across lot 7 in the VI concession, consisting of spruce, jack pine and poplar averaging about ten chains wide. Between long and Clay lakes are quite a few clumps of scattered jack pine. Some of the trees are fit for ties, but most of it is cord wood size. Another strip of cordwood extends along the south limit east from the Wabigoon river. It is in small patches in the low places, only suitable for cord wood, however. As a wood producer Redvers is poor.

The drainage of Redvers township is exceedingly good, accounting for the absence of large marshes. The meandering Wabigoon, the sluggish Hutchinson creek, and the several lakes afford almost an ideal system of drainage.

Of mines and minerals little need be said. The rock is all of the Laurentian pink type, utterly devoid of any minerals. In all of the too numerous exposures of rock, not one quartz vein or stringer did I discover, no not even the ubiquitous white iron. The compass gave no sudden indication of abundant mineral. It ranged from 7 to 10 degrees. The islands are composed of the same rock, some having a few sand beaches.

On the Wabigoon river are two water falls or rapids of minor importance. The upper rapid just south of the third concession has a fall of about 6-10 of a foot. The lower one has the same fall. Both are shallow and the canoeman must watch to choose the proper channel. It is, therefore, needless to reserve any land here for power purposes. The falls in Wabigoon are the proper ones to develop.

Fish are found in all of the lakes. Clay lake has white fish which the other waters have not. Jack fish and pickerel inhabit the other waters.

Black Bluff lake is as clear as crystal. The water is good and cool being fed by springs at the east end. It is shallow, and drains through the east end. No creek drains into it. Judging from the shore line its level does not vary much.

Of an entirely different nature is Mack lake. It is low and marshy. Dark and brackish are its waters. It is small and its level is nearly uniform.

Clay lake is a large body of water of semi-transparency. No unpleasant taste can be detected in its waters. Excellent fish of various varieties are caught. It is not a deep lake; the wind almost any day churns up its waters east of the cluster of islands. Its shore is fairly even, but is uniformly rocky and covered with small jack pine. Its shores are not steep, but a ridge follows the shore generally. The islands in the lake are suitable for resort purposes, being similar to the islands at Minaki.

Bowden, Red Pine and Long lakes are really one. In the first two are a few small rocky islands. They are shaggy looking and low. The water in these lakes is fairly clear and has a pleasant taste, Long lake being the clearest. Long lake has an area of weeds at its entrance, the lake here being very shallow. It has alternate high and low shores, but all are uniformly rocky. Fish of all the common varieties are found in these waters. Bowden received its name at the time of the construction of the Grand Trunk Pacific. All call it that and the common name of Blueberry should be forgotten. Mr. Bowden was one of my gang and I think the name should be continued.

Only small creeks run into this basin; the one from Yellow lake being also very small and impassable due to rocks and shallowness.

Yellow is a marshy lake. Its waters are darkish yellow; has a swampish taste. On its banks especially on the north resides splendid jack pine and spruce. Jack fish and pickerel are caught here.

All the surplus water passes off through the Hutchinson creek, a stream averaging five chains wide passing through low lands during its short course.

The soil of this township is very similar to Wabigoon. It is a whitish clay, fine and very compact. Only in the low places did I discover any black soil. In this township I found no sand. I found the south-east part of the township unfit for farming being composed mainly of bare rock. Small portions are good but they are scattered. Blueberries we saw in plenty. The choice portion of the township is the south-west where all the squatters reside. On this part also grows the best timber. Rock occurs frequently in this part, but the soil is the master. In the north-east part it is very patchy. Very little timber of any moment will be found. The south-central part has considerable small poplar and this will likely



be fair soil, but the rock I think exceeds the soil. That portion north of the river has some areas of soil, but rock far exceeds the land. Of that part between Long and Clay lakes one can assert truly that there is sufficient rock. Numerous valleys are there, which I think would give good results. Jack pine shows everywhere indicating that the soil is shallow. Hence I would say that the area of good land is not large, not exceeding one-half. Roads cannot be run in direct lines. The depressions must be followed. I have given the name of the squatters in another sheet.

The following new posts were planted:

- Lots 4 and 5, concession II.
- Lots 3 and 4, concession II.
- Lots 5 and 6, concession III.
- Lots 3 and 4, concession III.
- Lots 3 and 4, concession IV.
- Lots 1 and 2, concession V.
- Lots 1, concession III and IV.
- Lots 3 and 4, concession VI.
- Lots 5 and 6, concession VI.
- Lots 2 and 3, concession IV.
- Lots 6 and 7, concession IV.

All the posts along both sides of the river and marked R., and planted one chain from shore.

Post at the south east angle of lot 1, concession IV. There were no iron posts at the south-east and south-west angle. I took the whole gang and we went over the lines and replaced the posts that can be seen anywhere.

I observed polaris at eastern elongation to obtain north, taking latitude 50 for correction.

In obtaining areas of the lots bordering on Wabigoon and Clay lakes I subtracted the areas of the water and the road reserve.

I did the traverse on Long lake and the work on the south limit which consumed nearly three days. I left Quibell on October 16th and stopped off at Redditt till the following Saturday. My assistant was still working on the Traverse. After I had been home a week his notes arrived. I then secured Mr. Derouard to do the drawing. Mr. Rideout made out the field notes but made a mistake in paging them, so I did them all over again myself, which accounts greatly for the delay. Inexperience also had a great deal to do with it.

I shall forward all the notes and drawings by express.

I have the honour to be, Sir,

Your humble and obedient servant,

(Signed) ALBERT McMEEKIN,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines.  
Toronto, Ontario.

*Appendix No. 21.*

## SURVEY OF THE TOWNSHIP OF JACQUES, DISTRICT OF THUNDER BAY.

PORT ARTHUR, December 22nd, 1914.

SIR,—We beg to report that in accordance with your instructions dated July 28th, 1914, we have completed the survey of Jacques township, situated north of the township of Gorham in the district of Thunder Bay.

This township is about twenty miles north of the city of Port Arthur, from which city there is a well graded road to Concession VI, Gorham, from this point there is a winter road running through lots 15 and 16, Gorham, to the most southerly point of Surprise lake, which lake extends to the south boundary of the township of Jacques.

The survey was commenced at the north-east angle of lot 13, concession VIII, Gorham, the point being marked by a tamarac post, planted by O.L.S. Russell in 1913. From this point the south boundary of the township was run east astronomically to the south-east angle thereof, and from the same point run west astronomically 3 miles, 24 chains and 25 links to the south-west angle of the township, which point was established by producing the westerly limit of lot 18, concession VIII, Gorham, northerly to intersect our line. From the south-east angle of the township as established by the south boundary, the front angles of each lot were established by chaining 40 chains west astronomically and planting posts at equal intervals of 40 chains, excepting lot 12, the width of which was established by measuring from the south-west angle of lot 11 to the south-west angle of the township as established, the width being 64 chains and 25 links (64.25). From the south-east angle of the township a line was run south astronomically 79 chains and 93 links (79.93) to intersect the north limit of concession VII, Gorham, as run by O.L.S. Russell. From the same angle the east boundary of the township was run north astronomically. The west boundary of the township was run north astronomically from the south-west angle thereof. The side lines run, being those between lots 2 and 3, 4 and 5, 6 and 7, 8 and 9, 10 and 11 were run astronomically from the points established on the south boundary of the township. The side line between lots 6 and 7 was made the base for running the concession lines and the north boundary of the township; these were run from mile posts established by chaining from the south boundary east astronomically and west astronomically to intersect the other side lines and boundaries of the township as established.

In running the south boundary of the township west astronomically across lots 7 to 12 inclusive, the posts planted by O.L.S. Russell to mark the north limit of concession VIII, Gorham, were moved and planted at the intersections of the side lines as established by him, with the south boundary of the township. The distances these posts were moved and the new bearing trees were noted in the field notes.

Substantial wooden posts properly marked were planted on the concession lines and on the side lines where an intersection fell in a lake or river. It was not possible to mark bearing trees at several of the corners owing to the small and scattering nature of the timber. Iron posts were planted at the proper points as indicated in your instructions. In the case of half mile posts at lots 1 and 2, concession III, lots 11 and 12, concession IV, and lots 1 and 2, concession VI, these were planted on the north shore of the lakes and rivers in which the points

came at points north astronomically from their proper positions on the concession lines, and the distance measured to them from the concession lines noted in the field notes.

The lines were well opened up and properly blazed, and frequent observations were taken on Polaris at elongation so that the lines at no time varied more than four minutes from their proper bearing. The magnetic variation remained fairly constant at thirty minutes east.

#### TIMBER.

The greater part of the merchantable timber has been destroyed by fires which swept the country about twenty-five or thirty years ago, and portions were burned over again about ten years ago. Scattering groves of the original growth are to be found throughout, and the north-easterly section of the township is fairly well timbered, the chief economic species being the spruce and Banksian pine. In lots 9 and 10, concessions III, there is a stand of about five hundred trees of white pine of size averaging eighteen to twenty-four inches, but this is the only place in the township where this species is found.

#### SOIL.

The country throughout nearly the entire township is of a rough and broken nature and not well adapted for agricultural purposes. The percentage of land that would be suitable for farming including low lands and swamps, would be about twenty-five per cent. Along the east boundary of the township, in lots 1 and 2, through concessions II, III, and IV, there is considerable gravelly soil, and along some of the creeks and lakes, small tracts of from twenty to one hundred acres are available.

#### MINERALS.

The principal rocks encountered were red and gray granite with schist intrusions. Very little vein matter was observed, it being principally white, barren-looking quartz mostly in stringers. No bodies of iron of any importance were found.

#### LAKES.

The country abounds in lakes and creeks. The largest bodies Two-Island lake and One-Island lake have fairly clear water, but in the smaller lakes and creeks the waters are highly colored as they are fed principally by the soakage from the swamps. Concessions IV, V and VI and the greater part of III drain westerly and north-westerly and eventually find an outlet in Dog lake by way of Hawke lake. Concessions I, II, and part of III drain southerly and, with the exception of Barnum lake and Cummins lake, the waters drain into Hazelwood lake; Barnum and Cummins lakes drain easterly.

#### ISLANDS.

Twelve islands were found in the various lakes, and these were lettered from "A" to "H" and "J" to "M." Islands A, B, and C are in Two-Island lake, islands D and E are in One-Island lake, island F in Louttit lake, islands G and H



in Barnum lake, island J in Mary lake, island K in Lost lake, and islands L and M in Hay lake. Of these island B is the only one of any size, it is nicely timbered with birch and poplar and would be suitable for a summer resort. The remaining islands are small and rocky and are covered with scrub growth and underbrush.

#### ROUTES, ETC.

The township is crossed by a winter road leading to Greer Bros.' camps on the east bay of Dog lake; this being only a winter road follows the water courses principally so would not be suitable to open as a colonization road. Trappers' trails of recent date cover the entire township. There is a water route westerly from Paul lake which leads to Hawke bay of Dog lake.

#### CLEARINGS, IMPROVEMENTS, ETC.

There are three or four small cabins used by the trappers in the township and Greer Bros.' halfway camp is at the south end of Halfway lake; these were not occupied during the survey. No clearings of any nature were seen.

#### GAME.

Numerous indications were found of the smaller fur-bearing animals, principally lynx, beaver and fox. Moose and deer are not plentiful, and the only fish caught were pike. The waters of Two-Island and One-Island lakes appear to be suitable for trout, but none were caught.

We have the honour to be, Sir,

Your obedient servants,

(Signed) PHILLIPS & BENNER,

Ontario Land Surveyors.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

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#### *Appendix No. 22.*

#### SUBDIVISION OF PART OF THE TOWNSHIP OF FRALEIGH, IN THE DISTRICT OF THUNDER BAY.

FORT WILLIAM, Dec 11th, 1914.

SIR,—I beg to submit the following report on the subdivision of part of the township of Fraleigh, in the district of Thunder Bay surveyed by me, under instructions dated July 8th, 1914.

The north-west part of this township had previously been subdivided by Mr. F. W. Paulin, O.L.S.

Mr. Paulin shows by his field notes the north limit of lot number ten (10), concession seven (7), to have been completed, but no post planted for the north-east

angle of same stating that he there came to a sheer cliff of 600 feet. I commenced my survey on this north limit of lot ten (10), concession seven (7), and found that said limit had been cut for about 34 chains from the north-west angle of the lot and stopped at a 150 foot cliff. I found several pickets on this line and having no opportunity for an observation at this point, produced the line eastward from his picket planting posts as shown in the notes. My instructions were to run this line to intersect the west limit of mining claim 115E which had been surveyed in 1889.

I ran this line as above described and eventually reached a line marking the limits of said claim. This, however, was not a surveyed, but merely a random line. Said line was followed to the north and to the south. All posts had either been destroyed or had never been planted. Said line was, however, well blazed. I then planted a post as instructed and chained south down said line to where the southerly limit of the claim intersected this west limit.

While this work was in progress I had men searching for the north limit of concession eight (8) as my instructions were to run the line between lots eight and nine (8 and 9), southerly from the post planted by O.L.S. Paulin on this line to mark the north-east angle of lot nine (9), concession eight (8). This north limit could not be found. It had never been run. Subsequent search (two weeks later) showed that it had been run from hill to hill, omitting the parts in the valleys. I therefore took the chainage of 41.12 on the front of concession eight (8), from north-east angle lot ten (10), concession seven (7), and at this point turned off the front of concession eight (8) and ran the line between lots eight (8) and nine (9) northward some 46 chains. My reason for using this chainage was that O.L.S. Paulin had shown this as the width of the lot, on the rear of concession eight (8), and using this chainage would put my line between lots eight (8) and nine (9), very close to the location he intended for it. As stated above, subsequent search proved the rear of concession eight (8) to have been run from hill to hill. I then connected blazes on the hills and ran the line through the valley to intersect the line I had run between lots eight and nine (8 and 9) and I planted a post. There was no sign of the balsam post said to have been planted by O.L.S. Paulin at this point. No trace whatever was found of mining claim 28E. shown on the projected plan sent to me to be on the line between lots eight (8) and nine (9). There was no survey line intersecting my line, nor any blazed line at all.

The line above described for the line between lots eight (8) and nine (9) I then produced to the southward and ran it for four miles south of the north-east angle of lot nine (9), concession seven (7). There had been no opportunity this far for an astronomical observation, the weather having been most unfavorable.

I next ran the line between concessions six (6) and seven (7). I found the post planted by O.L.S. Paulin to mark the north-east angle of lot eleven (11), concession six (6). I found five of his pickets on the line marking the north limit of said lot eleven (11). There being no opportunity here for an observation I then lined up the pickets aforesaid and produced the line on to the eastward.

As shown in the field notes this line so produced intersected my line between lots eight and nine (8 and 9) 5.97 chains north of the point as determined by chainage to mark the north-east angle of lot nine (9), concession six (6). To date there had been no astronomical observations. I was, therefore, not positive of the bearing of my line between lots eight and nine (8 and 9), it having been turned off one of O.L.S. Paulin's lines. The same may be said of my line between concessions six and seven (6 and 7). It was produced from O.L.S. Paulin's line, and

I was not sure of the bearing. Therefore, upon crossing this line between lots eight and nine (8 and 9) at such a great distance north of the point as determined by chainage, I felt justified in turning off this line somewhat, in running on to the eastward for the north limit of lots eight and seven (8 and 7). I, therefore, turned off 90 degrees 10 feet to the north-east from my line between lots eight and nine (8 and 9) and ran this line on to intersect the east boundary of the township. At the completion of this work I was able *for the first time* to get an astronomical observation which showed my line between lots eight and nine (8 and 9) to be on the correct bearing. My instructions read to produce the lines as run by O.L.S. Paulin on astronomical bearings. Without tying up the whole party for from one to three days on each line to be produced, this was impossible. It was deemed advisable to produce the lines as run by O.L.S. Paulin from the pickets established by him, these being well planted and the lines fairly well cut out. As soon as possible, in every case, after doing this, the lines were checked by an astronomical observation, but as above stated on the work described to date, this was impossible, due to the weather.

Having ascertained that my line between lots eight and nine (8 and 9) was on the correct astronomical bearing, I chained southward on it four miles from the north-east angle of lot nine (9), concession (7), (and later rechained this) and from this point ran eastward to intersect the east boundary of the township. This line intersected the east boundary 7.77 chains north of the post planted by O.L.S. MacDougall, to mark the south-west corner of the township Pearson. My reason for running the front of concession four (4) off my line between lots eight and nine (8 and 9) was as follows: I was five miles from the west boundary of the township of Fraleigh and it was out of the question to run this line from that boundary without tying up the whole party for several days. Furthermore, I was not certain of finding posts on that boundary when I did get there. As proved by subsequent work—there were no posts there. I knew my line between lots eight and nine (8 and 9) to be on a correct astronomical bearing, and I also knew by the same observation that the front of concession eight (8) (as produced from O.L.S. Paulin) was on the correct bearing. I, therefore, ran the front of concession four (4) as above described. Considering this to be the very best result that could be obtained from the information at hand. Knowing that O.L.S. Paulin's line for the front of concession seven (7) was so far from being on the correct bearing and not having run the front of concession six (6), it seemed far from correct to assume that this latter line would even approximate the correct bearing, and hence running the lines for the front of concessions four and five (4 and 5) from a point on the east boundary of the township, one and two miles south from the intersection of the front of concession six (6) with that line, would be not nearly as accurate as the way I actually did run them on the ground.

I ran the front of concession five (5) off my line between lots eight and nine (8 and 9) at the proper chainage of three miles south from the north-east angle of lot nine (9), concession seven (7), as shown on my field notes. These lines for the front of the four and five (4 and 5) concessions were again checked by astronomical observations.

The east limit of lot eleven (11), concession six (6), had been run by O.L.S. Paulin, but no post had been planted for the south-east angle of said lot. I then chained, having also to cut out, this line from the north-east angle of the said lot (as shown on my field notes) as there was no post there. I used pickets planted by said O.L.S. Paulin and produced line south to intersect my line for



the front of concession five (5). From this point of intersection it was put on the correct bearing in continuing on to the front of the fourth concession.

After great difficulty I found the line run by O.L.S. Paulin for the limit between lots fourteen and fifteen (14 and 15), in concession six (6). This had been partly run, but not as far south as the south-east angle of lot fifteen (15). I found pickets on this line and produced it south to intersect my line for the front of concession five (5). Notes show that the great distance it crossed to the west of where it should have. The bearing at which it intersected the front of concession five (5), plainly shows that this line has been in error this amount right through from the rear on concession eight (8). It is evident that O.L.S. Paulin must have turned off in error this amount from said rear of concession eight (8) and continued his line on this incorrect bearing right through to the point at which I picked it up. Upon intersection the front of concession five (5) I ran the line between lots fourteen and fifteen (14 and 15) on the correct bearing, through concession five (5) to intersect the front of concession four (4) as run by me.

My lines for the front of concessions four and five (4 and 5) were run westward to intersect the west boundary of the township. At the point where said lines intersected the west boundary, posts were planted. There were no posts planted by O.L.S. Poulin on this west boundary, or if so, they have been destroyed, for there was no trace of them to be found.

I picked up the line run by O.L.S. Paulin for the limit between lots sixteen and seventeen (16 and 17), in concession five (5), and produced it south to intersect the front of the fourth concession as run by me. I picked up the line between lots twelve and thirteen (12 and 13) as run by O.L.S. Paulin and produced it south to intersect the front of the fifth concession as run by me. At this point I put the said line on the correct bearing and ran it south to intersect the front of concession four (4) as run by me. I picked up O.L.S. Paulin's line for the front of concession five (5) and produced it easterly, as shown on plan and field notes.

In general I had great difficulty in picking up the lines run by O.L.S. Paulin. They were often well cut out but poorly blazed, usually on but two sides of the trees. As there were many trails throughout this township it made the work more difficult. I wasted many hours in locating lines that should have been very easy to find considering the kind of country they were run through.

The errors in the bearings of these lines are seen from the field notes, the chainage in particular, being far from accurate. Knowing that these lines were far from being on the correct bearing, after running the very first one, I was yet forced to produce those found, as above stated, or else tie up my party for one or two days at each line to enable me to get an observation before running the line. This was of course out of the question as I should have been in there at least two months to accomplish that. However, as soon as possible after starting a line from these previously run lines I ascertained the correct bearing from intersections with my own lines or from astronomical observations, and then corrected the lines. In view of the difficulty, part of which I have described, I believe the work to have been done as well as the circumstances would permit. My work is seen to check fairly well on itself, the errors being where lines previously run were produced.

I reached the township of Fraleigh by going to the station of Silver Mountain on the Port Arthur and Duluth Railway. It is thirty-seven (37) miles from

Fort William. From this point I was able to team my supplies in over a fairly good wagon road, to the north boundary of the township, about a twelve (12) mile trip. Running through the township is a wagon road known as the "Palisades Road." There are many trails through this township, most likely made by trappers and prospectors. There are no settlers in the township. There is a camp of Finns located in there. They have made no improvements.

In the valleys there is good clay soil. The extent of the valleys may be seen by a glance at the plan. The township is, however, greatly broken up by rocky hills and sheer precipices, varying in height from 100 feet to 400 feet. A conservative estimate of the part of the township surveyed by me, suitable for agricultural purposes would place it at about 20 per cent.

Pine river, a small stream varying from a few links to half a chain in width flows through part of the township. It varies in depth from two to six feet and is closely grown up with alders and willows. There was but one lake to be found in the section of the township surveyed by me, this being on the south boundary. There were many small creeks and springs found where good water could be obtained.

The bush for the greater part consisted of small birch, jack pine, poplar and spruce, with alders. No balsam to speak of. Some large spruce was found, but not enough to make it of great commercial value. There was no pine to be found in the township.

The hills and cliffs shown were all rocky with huge boulders at their base. Considerable magnetite was found on these hills, the magnetic variation running as high as 25 degrees as shown in the field notes.

Moose are very plentiful in this township, although they will not be if the Finns aforesaid are allowed to hunt there much longer. Rabbits and partridge are very plentiful. Wolves were to be heard day and night and appear to be very numerous.

This report will, I think, cover all the details connected with the survey and the topography of this township.

I have the honour to be, Sir,

Your obedient servant,

(Signed) E. R. BINGHAM,

Ontario Land Surveyor.

The Honourable, the Minister of Lands, Forests and Mines,  
Toronto, Ontario.

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*Appendix No. 23.*

MEMORANDUM OF PARTIES WHO PASSED AT THE CULLERS' EXAMINATION OF 1915.

No. 1495, Gorman, Bert, Kenney Siding. Examined at North Bay on August 3rd, 1915. Licensed September 27th, 1915.

No. 1496, Richey, A W., Sudbury. Same examination, etc

No. 1497, Landry, Fred. S., Sturgeon Falls. Same examination, etc.

No. 1498, Bailey, Alex., Thor Lake via Sudbury. Same examination, etc.  
Toronto, December 15th, 1915.

*Appendix No. 24.*

## ALGONQUIN PROVINCIAL PARK.

ALGONQUIN PARK P.O., November 4, 1915.

*To the Honourable, the Minister of Lands, Forests and Mines, Toronto:*

HONOURABLE SIR,—I beg to hand you my report on the Algonquin Provincial Park of Ontario for the fiscal year ending October 31st, 1915.

We, your staff, deplore the fact that the Empire is still in the midst of a war that is being felt to the most remote corners of the land. Even here in the heart of the forest we feel its effects and look forward to the day when, with God's blessing, the arm of the would-be oppressor shall be broken and peace restored.

Our permanent staff at the close of the year consists of superintendent and thirty men, two of whom, H. A. Callighan and Capt. Mark Robinson, have been called to join their regiments, the former doing duty at Niagara Camp, the latter acting as assistant recruiting officer at Barrie.

Our staff has done good work during the past year. Infringements of the Park Act have been few and of a minor character.

We have had a most favorable season as to bush fires, having had frequent rains, and I am glad to report no damage whatever from this source. The Grand Trunk Railway, carrying out the instructions of the Railway Commission, had a car constructed with two large tanks and a powerful pump fitted with a good supply of hose. This was stationed at our headquarters with a competent man in charge; the company's chief fire inspector, Mr. McKinnon, was also stationed here. The tank car, although not required this year to any extent, is an excellent thing, and would render most valuable assistance in the early stages of fire along the right-of-way. An emergency equipment of blankets, axes, shovels, pails, etc., was secured and stored at headquarters, and every possible precaution taken against fire.

Next season it is proposed to erect look-out towers at several of the highest points in the Park; these would be a great help in locating fires and enable us to reach them more quickly. There are many points in the Park where such towers could be erected to advantage, such as "Skymount" where with a tower of thirty-five feet the lookout would be able to locate a fire over an area of ten square miles on both sides. This point would be connected with headquarters by telephone, as could several others at a very moderate cost.

A number of men with the Park team of horses have been employed in cleaning along the railway. They clean and stump the right-of-way, and draw the debris out of the woods for some distance back from it. They have done excellent work, which not only adds to the appearance of the Park when passing through by rail, but will be a lasting benefit in the added protection it affords against fires from the locomotives. During the past year some twenty-two miles have been so cleaned on each side of the railway and a great deal of the debris burnt. The remainder will be burnt during the fall. The Grand Trunk Railway pay for half of this work. Much improvement has been made at headquarters, the work being done by the permanent staff as opportunity afforded. We have kept a few live animals in the animal house for the benefit of the many people who visit the Park and delight in seeing specimens of the native animals. We have not



realized as much money as we had expected from the sale of live animals, nearly all orders having been cancelled owing to the war. This, however, is only a temporary set back. We sent out a few live beaver to points in the United States and some to parks and gardens in Ontario. We also sold a few pelts, the demand for furs owing to the cause mentioned above being such that it was deemed unadvisable to take out a large quantity.



Trap for capturing live beaver, Algonquin Park.

Our staff report game in all sections very much on the increase. Beaver, otter, mink, marten and fisher are very abundant, as are the deer; the latter owing to a sense of protection becoming so tame that they visit our lawn nightly, as our flower beds bear sad testimony. Their tracks can be seen on the station platform and terraces of the hotel grounds. There is a great deal of hunting during the season on all sides of the Park, the deer from here keeping these hunting grounds well replenished. Fishing has been good in most waters, and

some very fine specimens have been taken. Receipts from licenses were not quite so good as last year, but much better than I had expected considering present conditions. I should like to see a good hatchery established here in connection with the Park. There is not a section of the Province better adapted to the purpose. Several important rivers take their rise in the Park, and by keeping them well supplied at their source, the stock in the rivers and in many of their tributaries is kept up. This has been well demonstrated by the small-mouthed bass placed in these waters. The Madawaska river and its feeders are now well stocked for two hundred miles from its source. Formerly there were no bass in these waters. I had a very fine specimen sent me this year weighing five pounds three ounces, and larger were reported taken. I hope the Department will next year send me a good supply of bass and trout fry from the hatcheries to place in the waters near the hotels, which require keeping up more than the distance streams.



Special crate for shipping live beaver and other animals, Algonquin Park.

After several years' experiment I am convinced that the close season for lake trout here is too late, and I would strongly recommend its being changed in the Park to the fifteenth day of October. I have noticed that all trout caught in these waters have spawned out shortly after that date, and I am satisfied from former observations that this applies to most of our northern waters in the Province.

Complying with your instructions a telephone line has been constructed from Rainy lake to the village of Whitney a distance of some sixty miles, the poles of the Grand Trunk Railway being used. This line is up-to-date throughout; we have sixteen 'phone connections at the most important points. The line has not only been of great benefit to us in our work, most of all in enabling us to get word quickly in case of fires and to arrange for assistance where required, thereby preventing several fires that would have been serious, but it has also been a great convenience to the hundreds of visitors and campers. Rainy Lake, the present terminus, is only fifteen miles from the town of Kearney, and I hope in the near



future the line may be completed to this point, thereby giving us connection with the Bell Telephone Company and long distance. This would be of considerable advantage to us and a boon to the visitors to the Park. A great deal of this construction work has been done by the rangers.

Six new shelters have been built, one at each of the following points: South river on the western boundary, Mud lake, Harries lake, Crotch lake, Rock lake and Grand lake. At the latter two points larger buildings have been put up with three rooms and a storehouse, they being main points. Grand lake is in the new section and on the line of the Canadian Northern Railway. Several of the old shelters have been repaired, portages have been cleaned out and several new ones cut. Wood and ice supply has also been looked after by the staff. These things have been done during the season when no trapping is done. During the trapping season the rangers travel their sections constantly. They go in pairs, each two



Natural reproduction of white pine, Petawawa river, Algonquin Park.

men having a regular beat which they are expected to patrol and keep in order, keeping portages clear and streams free from debris. Wolves are still numerous, although the staff kill from sixty to a hundred every year. There is no doubt these pests come in from the north as soon as the severe weather sets in, finding the food much more plentiful in the Park than elsewhere. Our men kill many that they do not get owing to snowfalls before they visit their baits.

The squatters in the section recently added to the Park have been paid for their improvements and have all moved out to other places. This section will soon fill up with game of all kinds, it being a splendid locality for such. There is also a vast quantity of young pine coming on in many parts, making it doubly important to protect this section from bush fires which have already done considerable damage in parts of it.

The Canadian Northern Railway have completed their line through the north end of the Park and regular trains will shortly be running on it. This line



follows some of our finest lakes and rivers, namely Grand lake, the Petewawa river, lakes Travers, Francis, Cedar, Oralee, the Couchons, Mink and Kiosh-koqui, crossing the Amable Dufond river at the latter point and bearing north from the Park lines shortly after. This opens up one of the finest sections in America from an angler's point of view. They are building round-houses at Cedar lake in the township of Deacon, and this I presume will be a divisional point. The system of fire-ranging along the line this year was very good.

We have had the usual large number of visitors from all over Canada and the United States, as well as from other countries. I had a very interesting visit from the Japanese consul, who was much interested in our methods of protection both of game and forest.

The tourist business has suffered from the war in most sections. Here, however, the hotels were well patronized, especially the Grand Trunk Railway camps on Smoke and Big Island lakes. As a health resort the Park has no equal, the boys and girls who make up the school camps here bearing wonderful testimony to this. Miss F. L. Case, of Rochester, N.Y., who has a camp of forty girls ranging from twelve to sixteen years of age and twenty teachers and help, making a camp of sixty persons, assured me that the average gain in weight of the forty girls was seven pounds in six weeks. We have four boys' camps, one on Source lake, one on Lake of Two Rivers, one on Cache lake and one on Joe lake. These camps are doing a splendid work, building up not only healthy bodies but minds as well. The boys spend six weeks in camp, and the marked improvement in them shows conclusively that for the city boy the woods are the proper place for a holiday. The education they receive stays with them all their lives, and is far-reaching in its influence for good. These camps, as do the other visitors, leave a lot of ready money with our merchants. It is hard to estimate just what it really meant to them from a financial standpoint. They also employ a large number of guides to whom they pay a good wage.

We have a number of permanent campers who have leased points and put up cottages, and have had several fresh applications this year, to all of whom leases have been granted. They pay \$10.00 for survey of their plot and an annual rental of \$7.50 per acre, the maximum acreage being two acres to cottagers and five to schools. The latter pay a yearly rental of \$75.00. Every alternate lot is reserved for camp sites for transient visitors. The leases run for twenty-one years, and holders are required to clean up the debris on their holdings and keep them in a good sanitary condition.

As it is only practicable to take out live animals in sections near the railway, I would recommend as soon as the market warrants doing so, taking out a number of beaver pelts annually from inland points. They have become very numerous and have filled up the surrounding country for many townships back from the Park. A good revenue might be had from them without the slightest detriment to the Park. I would recommend taking at least five hundred pelts a year. The proceeds going into the treasury as they do, are a benefit to every ratepayer in the Province. The surplus increase of fur-bearing animals in the Park judiciously taken out would represent several thousand dollars a year, and I think the Province should avail itself of this revenue just as it does of other resources of the country.

During the past year we have collected the following sums here, for fishing licenses \$1,115.00, rents \$365.00, beaver skins \$130.00, and live beaver \$120.00,

making a total of \$1,738.00. This does not include rents, etc., paid direct to Toronto.

I have the honour to be, Honourable Sir,

Yours very truly,

G. W. BARTLETT,

*Superintendent*

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*Appendix No. 25.*

QUETICO PROVINCIAL PARK.

QUETICO PARK, November 1, 1915.

*To the Honourable, the Minister of Lands, Forests and Mines, Toronto.*

HONOURABLE SIR,—I beg to hand you my report on Quetico Provincial Park for the fiscal year ending October 31, 1915.

The Park staff during the past year has been composed of eleven rangers and the superintendent. Two of my rangers have enlisted during the past season, one of whom was severely wounded in the battle of Langemarck, in France. I also had four fire-rangers on the Park during the past season. I find I will require some extra men for next season, as the territory to be patrolled is too great for the number of men now employed.

The size or area of the sections or "beats" is determined by the ease with which they can be travelled. In some cases in which long stretches of good canoeing and good portages can be had, the travelling may be done much more easily and in less time than in portions where the carries are long and rough and the streams small and shallow. During the past season we cleared out many portages and improved streams in various portions of the Park. Nine new shelter huts were built during the summer, which will be of great benefit to my rangers during the coming winter, saving them the trouble of portaging tents.

We also improved two small buildings at old lumber camps which will be used as shelter huts. One hut at the foot of Pickerel lake was slightly damaged by a falling tree, but was soon repaired. During last winter I chained some portions of the north boundary so as to determine the exact location of the outside mile limit of the Park with a view to prevent any hunting or trapping in that territory.

I also chained the distance from the Park headquarters to Kawene station on the Canadian Northern railway, and find it to be almost eight miles. I intend, when time permits, or by working at spare times during the fall and winter, to cut out a saddle trail around the south and southwesterly shores of Eva Lake, some twelve miles, so as to be in a position to reach the station and post office during the stormy period on the lakes, and especially during the freezing up time in the fall. Eva lake is five miles long, and is often very difficult to cross on account of high winds, sometimes impossible for days at a time.

I built a good ice house at headquarters last winter and put in a supply of ice, also erected a small hay shed, and now use the former shed for storing canoes

and equipment. I had signs painted and placed along the various routes in the Park wherever possible, also had my men put up fire notices along all the beats. We were very fortunate in being able to pass through the season without any fires in the Park. Two fires were started, presumably by lightning, but were noticed in time and extinguished.

I insist on my rangers being constantly on patrol and on the lookout for fires, especially during the dry season from May until September when tourists are canoeing in the Park. In speaking of tourists, I must pay a compliment to the many Americans who passed through the Park last season by saying that they take every precaution in preventing fires from getting away from them. They are very careful in choosing camping-grounds and in extinguishing fires when leaving camp. Many Americans passed through the Park, especially in the southern portions and along the International boundary, and in all cases complied with the regulations. I have had several letters from tourists who speak very highly of the treatment received from the rangers. Numbers of tourists come in, not for the sake of fishing, but for the sake of the life in the woods and to enjoy canoe trips on our excellent waterways, and especially to see our large game. The routes from Basswood lake to Agnes, Kinippi, via Sturgeon river to Sturgeon narrows, Moose bay, Sturgeon lake, and down Maligne river to Lac Lacroix seem to be the favorite ones, but many go to Eden island on Quetico lake. There were two Canadian travellers only in the Park this year.

I would advise placing metal signs along the boundaries of the Park for the guidance of travellers. The paint seems to wear off wooden signs very fast during the rainy season. There has not been any lumbering in the Park since I took charge of it. Lumbering is being carried on this season on timber berth G-43 north of Batchwaung lake. Some of this timber will be hauled through Park waters. I have placed two rangers in that vicinity to see that the Park laws are observed. It will be necessary to erect two new shelter huts this winter or in spring; one on Long island in Kinippi lake, and another on some island in Agnes lake. The huts built at Knife and Seiganagah lakes are in excellent positions. I visited my rangers along the International boundary in August, and find they are doing good work, building huts, improving trails, etc. The International boundary survey parties worked along the Park boundaries this season. I notice they take precautions to prevent fires, but regret that the nature of their work makes it necessary for them to do considerable slashing and at times cut down many large pine trees.

I do not think any illegal trapping or hunting was done during last winter. The rangers did not report any trouble in that line. Moose and red deer are very plentiful, and I am pleased to be able to report that the caribou are returning to this portion of the country, many having been seen in the Park during summer. I am told they have not been seen here for some years.

Beaver are increasing rapidly; quite a few new dams were built during spring and summer. Smaller fur-bearing animals are on the increase, no doubt owing to the protection afforded them in the Park.

Bears were very numerous last summer, and were often seen near headquarters.

Wolves are still numerous, especially the smaller species, locally called "bush-wolves."

It is to be regretted that a bounty is not granted for the killing of these animals. They are in every respect as destructive to game as their larger brother the timber wolf. This I know from experience during the past winter. My



rangers have shot and poisoned many. I tried to get bounty for them but failed. Trappers outside of the Park have killed many, but also failed to get a bounty. Those animals kill many deer in winter, but as there is no inducement offered to destroy them hunters and others do not take the trouble to kill them off. Coyotes are very numerous in the Park and surrounding country, and owing to the scarcity of partridge and rabbits they have become very bold and come close to the buildings. Partridges are seldom seen this fall. The cold, heavy rains in the early part of June last seem to have destroyed the eggs and young birds. No doubt the coyotes have killed many also. Many large flocks of black ducks and mallard were seen in the smaller lakes this year, but they do not remain as there is no feed for them. I would suggest that a supply of wild rice and celery be sown in some of the lakes with a view to increasing the food supply of the ducks, thereby encouraging them to remain in Park waters where they could breed and rear their young without molestation.

I have cleaned up quite a scope of ground about the buildings so as to protect them from fire, and in cutting my firewood for the winter I am cleaning up all the debris along the shore of French lake near the house.

It will be necessary to secure about three hundred feet or so of lumber to cover and fix up a woodshed, as our wood is often covered by snow drifts in winter. This done, I intend going to the south portion of the Park along the eastern boundary when I can travel on the ice.

I have the honour to be, Sir,

Your obedient servant,

A. J. McDONALD,

*Superintendent.*

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*Appendix No. 26.*

REPORT OF THE FORESTRY BRANCH.

PARLIAMENT BUILDINGS, Toronto.

SIR,—I have the honour to submit the following report of the Forestry Branch for the year ending October 31st, 1915.

The following phases of forestry work have occupied the Branch during the past year:—

Provincial Forest Station in Norfolk County.

Distribution of forest planting material to applicants throughout Ontario.

Reports and correspondence in regard to various forestry problems.

Course of lectures at Ontario Agricultural College.

Railway Fire Protection along lines under the jurisdiction of the Board of Railway Commissioners of Canada.

## PROVINCIAL FOREST STATION, NORFOLK COUNTY.

*Forest Nurseries.*—During the past season the Nurseries have produced the following stock:—

White Pine .....	475,500
White Cedar .....	175,000
Red Pine .....	54,400
Jack Pine .....	84,600
Scotch Pine .....	33,000
Yellow Pine .....	10,000
Miscellaneous Conifers .....	40,000
White or Soft Maple .....	15,600
Sugar Maple .....	12,100
Manitoba Maple .....	5,700
White Ash .....	20,500
American Elm .....	16,500
Carolina Poplar .....	4,200
Black Walnut .....	15,000
Butternut .....	3,000
Chestnut .....	7,500
Red Oak .....	7,500
Miscellaneous Hardwoods .....	11,000
Total .....	991,100

Our stock of Scotch Pine is low owing to the fact that we imported the one year old seedling in past years from Europe. Owing to the war, this source of material was closed. As it takes at least two years to produce, from the seed, satisfactory planting stock, it will take us another year to make up the loss.

In future we hope to grow all of our coniferous material from the seed and to no longer depend upon imported stock.

*Plantations.*—During this last season the various plantations have made very good growth. The plantation made in 1909 with Scotch Pine and Jack Pine upon the sand ridge as shown in Figure IX and X of my report of 1914, has now assumed the thicket stage. These trees are now ten to fifteen feet in height and the sandy ridge is taking on the appearance of a young forest.

One of our most promising trees is the European Larch (*Larix europea*). This tree, which is similar to our native Tamarac, has been used in mixture in some of our plantations. At present it is the most rapid growing tree which we have planted. Many specimens have sent out leaders this last season of 24 to 36 inches. This larch has a serious enemy in the Larch Saw Fly, and we are only planting it in mixtures with other trees where it seems to be less liable to attack.

Records are being kept of the growth and history of the various plantations and these will prove of great value in future problems in connection with reforestation.

*Co-operative Planting.*—Trees are supplied from the Norfolk County Nurseries to those wishing to undertake forest planting in other parts of Ontario. At present planting material is supplied free to those wishing to plant up waste land or to carry on demonstration plantings, as outlined in a Circular which will be supplied upon application to the Forestry Branch, Parliament Buildings.



Fig. 1—"Headquarters" Provincial Forest Station, Norfolk County.



During this last season we sent out from Norfolk about 325,000 young trees to other parts of Ontario for demonstration and experimental planting.

*Natural Reproduction.*—At this Station in Norfolk County, we have a number of areas of “second growth” White Pine and Hardwoods, where artificial planting will not be required. Such an area is shown in Fig. 3, where trees run from 3 to 12 inches in diameter. This is a delightful piece of woodland where the soil has a good covering of leaf mould and where forest soil conditions may be said to be ideal.

The educational feature of this work will become increasingly valuable. Many people are visiting the Forest Station from various parts of Ontario. During the last spring term the students of the Forest School of the University of Toronto spent a few days at the Station. They were given instruction in forest nursery and plantation work.

Early in the past summer we lost, through untimely death, our Superintendent, Mr. George Lane. I wish to take this opportunity of recording an appreciation of his work. He was an excellent manager of men and a most conscientious worker himself. Whatever success has attended the beginning of this work, was due in a large part to his loyalty and devotion to his work.

#### RAILWAY FIRE PROTECTION.

Before describing the details of our past season's work it may be of interest to give the legal status of Railway Fire Protection in Canada as related to Ontario conditions.

The Railway Act of Canada places the responsibility of protecting the public against fire loss, due to railway operation, upon the railway companies.

#### EXTRACTS FROM THE RAILWAY ACT OF CANADA AND AMENDMENTS THERE TO RELATING TO FIRE PROTECTION.

The Board may make orders and regulations:—

- (f) With respect to the use on any engine of nettings, screens, grates and other devices, and the use on any engine or car of any appliances and precautions, and generally in connection with the railway, respecting the construction, use and maintenance of any fire-guard or works which may be deemed by the Board necessary and most suitable to prevent, as far as possible, fires from being started, or occurring, upon, along, or near the right-of-way of the railway, and may require the company to establish and maintain an efficient and competent staff of fire-rangers equipped with such appliances for fighting, or preventing fires from spreading, as the Board may deem proper, and to provide such rangers with proper and suitable equipment to enable them to move from place to place along the line of railway with all due speed. The Board may require the company to maintain an efficient patrol of the line of railway and other lands in the vicinity thereof, to which fires may spread, and generally define the duties of the company, and the said fire-rangers, in respect thereof. The Board may require the company

Sec 30,  
Railway  
Act (Chap.  
37, R. A.,  
1906).

(Amend-  
ment, by  
Sec. 2,  
Chap. 22,  
Railway  
Act, 1911.)

to make returns of the names of fire-rangers in its employ in the performance of the above duties, and at the places or areas in which they are from time to time engaged. For the purpose of fighting and extinguishing fires, the said fire-rangers may follow the fires which spread from the railway to, over, and upon the lands to which they may spread.

269. The Board may make regulations:—

- (b) Providing that coal shall be used on all locomotives instead of wood in any district; and
- (c) Generally providing for the protection of property, and the protection, safety, accommodation and comfort of the public, and of the employees of the company, in the running and operating of trains by the company.

297. The company shall at all times maintain and keep its right-of-way free from dead or dry grass, weeds and other unnecessary combustible matter.

Whenever damage is caused to any property by a fire started by any railway locomotive, the company making use of such locomotive, whether guilty of negligence or not, shall be liable for such damage, and may be sued for the recovery of the amount of such damage in any court of competent jurisdiction; Provided that, if it be shown that the company has used modern and efficient appliances, and has not otherwise been guilty of any negligence, the total amount of compensation recoverable from the company under this section in respect of any one or more claims for damage from fire or fires started by the same locomotive and upon the same occasion, shall not exceed five thousand dollars; provided also that if there is any insurance existing on the property destroyed or damaged the total amount of damages sustained by any claimant in respect of the destruction or damage of such property shall, for the purposes of this subsection, be reduced by the amount accepted or recovered by or for the benefit of such claimant in respect of such insurance. No action shall lie against the company by reason of anything in any policy of insurance or by reason of payment of any moneys thereunder. The limitation of one year prescribed by section 306 of this Act shall run from the date of final judgment in any action brought by the assured to recover such insurance money, or, in the case of settlement, from the date of the receipt of such moneys by the assured, as the case may be.

298 (En-  
acted as  
Sec. 298 of  
principal  
Act, and  
other legis-  
lation  
repealed,  
Sec. 10,  
Chap. 22,  
1911).

2. The compensation, in case the total amount recovered therefor is less than the claims established, shall be apportioned amongst the parties who suffered the loss, as the court or judge may determine.

3. The company shall have an insurable interest in all property upon or along its route, for which it may be held liable to compensate the owners for loss or damage by fire caused by a railway locomotive, and may procure insurance thereon in its own behalf.

4. The Board may order, upon such terms and conditions as it deems expedient, that fire guards be established and maintained by the company along the route of its railway and upon any lands, of His Majesty or of any person, lying along such route, and, subject to the terms and conditions of any such order, the company may at all times enter into and upon such lands for the purpose of establishing and maintaining such fire guards thereon, and freeing, from dead or dry grass, weeds and other unnecessary inflammable matter, the land between such fire guards and the line of railway.

Through the power bestowed upon the Board by the Railway Act a number of Orders have been issued in relation to Railway Fire Protection. At present we are working under Order 107, as given below:—

General Order No. 107.

THE BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

*Friday the 4th day of July, A.D. 1913.*

It is Ordered as follows:—

1. Order No. 16570, dated May 22nd, 1912, is hereby rescinded.

2. Until further order, every Railway subject to the legislative authority of the Parliament of Canada, under construction or being operated by steam, shall, unless exempted by a special order of the Board, cause every locomotive engine used on the said railway, or portion of railway, being constructed or operated by it, to be fitted and kept fitted with netting mesh as hereinafter set forth, namely;

(a) On every engine equipped with an extension smoke box, the mesh shall not be larger than  $2\frac{1}{2} \times 2\frac{1}{2}$  per inch of No. 10 Birmingham Wire Gauge, and shall be placed in the smoke box so as to extend completely over the aperture through which the smoke ascends, the openings of the said mesh not to exceed a quarter of an inch and one sixty-fourth (that is, seventeen sixty-fourths) of an inch to the square.

(b) On every engine equipped with a diamond stack, the mesh shall not be more than  $3 \times 3$  per inch of No. 10 Birmingham Wire Gauge, and shall be placed at the flare of the diamond of the stack, so as to cover the same completely, the openings of said mesh not to exceed three-sixteenths and one-sixty-fourth (that is, thirteen sixty-fourths) of an inch to the square.

3. Every such railway company shall cause:—

(a) The openings of the ash pans on every locomotive engine used on the railway, or portion of railway, operated or being constructed by it, to be covered, when practicable, with heavy sheet iron dampers; and, if not practicable, with screen netting dampers  $2\frac{1}{2} \times 2\frac{1}{2}$  per inch of No. 10 Birmingham Wire Gauge, such dampers to be fastened either by a heavy spring or by a split cotter and pins, or by such other method as may be approved by the Board.



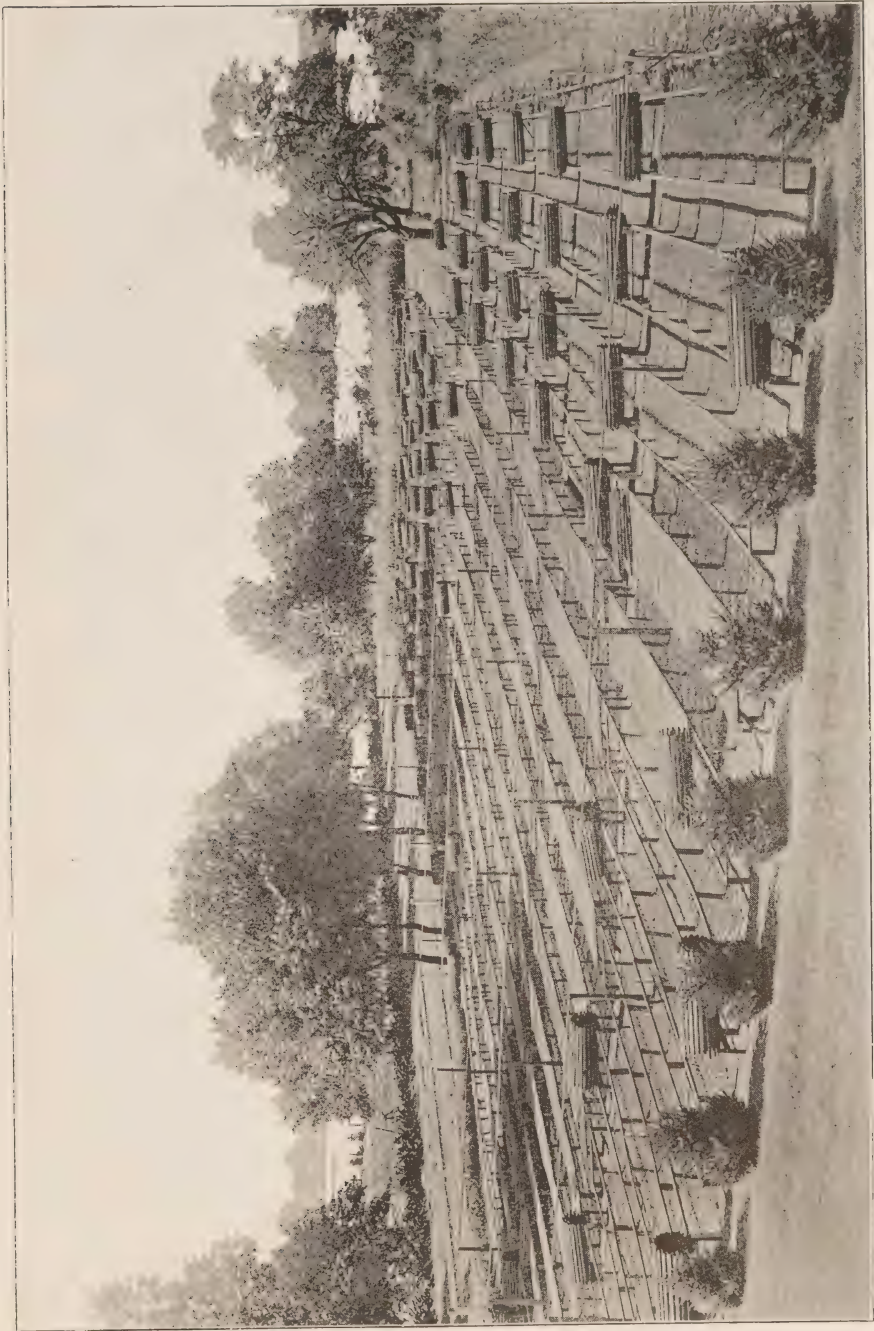


Fig. 2—Coniferous seed beds, showing shades and overhead watering system,  
Provincial Forest Station, Norfolk County.

(b) Overflow pipes from lifting injectors, or from water pipes from injector-delivery pipe, or from boiler, to be put into the front and back part of the ash pans and used from the first day of April to the first day of November, or during such portion of this period as the Board may prescribe, for wetting ash pans.

4. Every such railway company shall provide inspectors at terminal or divisional points where its locomotive engines are housed and repaired; and cause them, in addition to the duties to which they may be assigned by the officials of the railway companies in charge of such terminal or divisional points:—

(a) To examine at least once a week:

- (1) The Nettings;
- (2) Dead Plates;
- (3) Ash Pans;
- (4) Dampers;
- (5) Slides; and
- (6) Any other fire-protective appliance or appliances used on any and all engines running into the said terminal or divisional points.

(b) To keep a record of every inspection in a book to be furnished by the railway company for the purpose, showing:—

- (1) The numbers of the engines inspected;
- (2) The date and hour of day of such inspection;
- (3) The condition of the said fire-protective appliances and arrangements; and
- (4) A record of repairs made in any of the above-mentioned fire-protective appliances.

The said book to be open for inspection by any authorized officer of the Board.

(c) In case any of the said fire-protective appliances in any locomotive are found to be defective, said locomotive shall be removed from service and shall not (during said prescribed period) be returned to service unless and until such defects are remedied.

(d) Every such railway company shall also make an independent examination of the fire-protective appliances on all the locomotives of such company, at least once each month, and the conditions of such fire-protective appliances shall be reported direct to the Chief Mechanical Officer of the railway company, or other chief officer, held responsible for the condition of the motive power of the said company.

5. No employee of any such railway company shall—

(a) Do, or in any way cause, damage to the netting on the engine smoke-stack or to the netting in the front end of such engine;

(b) Open the back dampers of such engine while running ahead, or the front dampers while running tender first, except when there is snow on the ground, and it is necessary to take such action in order to have engine steam properly;



(c) Or otherwise do or cause damage or injury to any of the fire protective appliances on the said engines.

6. No such railway company shall permit fire, live coals, or ashes to be deposited upon its tracks or right of way, unless they are extinguished immediately thereafter, except in pits provided for the purpose.

7. No such railway company shall burn lignite coal on its locomotive engines as fuel for transportation purposes, unless otherwise ordered by the Board—lignite coal consisting of and including all varieties of coal between peat and bituminous, with a carbon-hydrogen ratio of 11.2 or less, such ratio being based on analysis of air-dried coal.



Fig. 3—Natural woodland conditions existing on parts of the land at the Provincial Forest Station.

8. Every such railway company shall establish and maintain fire-guards along the route of its railway as the Chief Fire Inspector may prescribe. The nature, extent, establishment and maintenance of such fire-guards shall be determined as follows:—

(a) The Chief Fire Inspector shall each year prepare and submit to every such railway company a statement of the measures necessary for establishing and maintaining the routes of such railways in a condition safe from fire, so far as may be practicable.

(b) Said measures may provide for the cutting and disposal by fire, or otherwise, of all or any growth of an inflammable character, and the burning or other



disposal of debris and litter, on a strip of sufficient width on one or both sides of the track; the ploughing or digging of land in strips of sufficient width on one or both sides of the track; and such other work as may, under the existing local conditions and at reasonable expense, tend to reduce to a minimum the occurrence and spread of fire.

(c) Said statements of the Chief Fire Inspector shall be so arranged as to deal with and prescribe measures for each separate portion of such railway upon and adjacent to which the fire risk calls for specific treatment. The intention shall be to adjust the protective measures to the local conditions and to make the expense proportionate to the fire risk and possible damage.



Fig. 4—Plantation made in 1909. Now seven years old (1915).

(d) Said statements of the Chief Fire Inspector shall prescribe dates on or within which the foregoing protective measures shall be commenced and completed, and the fire-guards maintained in a clean and safe condition.

(e) No such railway company shall permit its employees, agents, or contractors to enter upon land under cultivation, to construct fire-guards, without the consent of the owner or occupant of such land.

(f) Wherever the owner or occupant of such land objects to the construction of fire-guards, on the ground that the said construction would involve unreasonable loss or damage to property, the Company shall *at once* refer the matter to the Board, giving full particulars thereof, and shall in the meantime refrain from proceeding with the work.

(g) No agent, employee, or contractor of any such railway company shall permit gates to be left open or to cut or leave fences down whereby stock or crops may be injured or to do any other unnecessary damage to property, in the construction of fire-guards.

9. In carrying out the provisions of Section 297 of the Railway Act, which enacts that "the Company shall at all times maintain and keep its right-of-way free from dead or dry grass, weeds, and other unnecessary combustible matter," no such railway company or its agents, employees or contractors shall, between the first day of April and the first day of November, burn or cause to be burned



Fig. 5—Near view of plantation shown in Fig. 4.

any ties, cuttings, debris, or litter upon or near its right-of-way, except under such supervision as will prevent such fires from spreading beyond the strip being cleared. The Chief Fire Inspector or other authorized officer of the Board may require that no such burning be done along specified portions of the line of any such railway, except with the written permission or under the direction of the Chief Fire Inspector or other authorized officer of the Board.

10. The railway company shall provide and maintain a force of fire-rangers fit and sufficient for efficient patrol and fire-fighting duty during the period from the first day of April to the first day of November of each year; and the methods of such force shall be subject to the supervision and direction of the Chief Fire Inspector or other authorized officer of the Board.



11. The Chief Fire Inspector shall, each year, prepare and submit to each and every railway company a statement of the measures such railway companies shall take for the establishment and maintenance of said specially organized force. Said statements among other matters may provide for—

(a) The number of men to be employed on the said force, their location and general duties, and the methods and frequency of the patrol.

(b) The acquisition and location of necessary equipment for transporting the said force from place to place, and the acquisition and distributing of suitable fire-fighting tools; and



Fig. 6—Two year old Bull Pine seedlings ready for transplanting.

(c) Any other measures which are considered by him to be essential for the immediate control of fire and may be adopted at reasonable expense.

12. Whenever and while all the locomotive engines used upon any such railway, or any portion of it, burn nothing but oil as fuel, during the aforesaid prescribed period, under such conditions as the Board may approve, the Board will relieve the said railway of such portion of these regulations as may seem to it safe and expedient.

13. Every such railway company shall instruct and require its sectionmen and other employees, agents and contractors to take measures to report and extinguish fires on or near the right-of-way as follows:—



(a) Conductors, engineers, or trainmen who discover or receive notice of the existence and location of a fire burning upon or near the right-of-way, or of a fire which threatens land adjacent to the right-of-way, shall report the same by wire to the Superintendent, and shall also report it to the agent or persons in charge at the next point at which there shall be communication by telegraph or telephone, and to the first section employees passed. Notice of such fire shall also be given immediately by a system of warning whistles.

(b) It shall be the duty of the Superintendent or agent or person so informed to notify immediately the nearest forest officer and the nearest section employees of the railway, of the existence and location of such fire.



Fig 7—Remnants of previous forest growth shown in old pine stumps. Young pine started in blow sand.

(c) When fire is discovered, presumably started by the railway, such sectionmen or other employees of the railway as are available shall either independently or at the request of any authorized forest officer proceed to the fire immediately and take action to extinguish it; provided such sectionmen or other employees are not at the time engaged in labours immediately necessary to the safety of trains.

(d) In case the sectionmen or other employees available are not a sufficient force to extinguish the fire promptly, the railway company shall, either independently or at the request of any authorized forest officer, employ such other labourers as may be necessary to extinguish the fire; and as soon as a sufficient number of men, other than the sectionmen and regular employees, are obtained, the sectionmen and other regular employees shall be allowed to resume their regular duties.

(e) The provisions of this section shall apply to all fires occurring within 300 feet of the railway track, unless proof shall be furnished that such fires were not caused by the railway.

14. Every such railway company shall give particular instructions to its employees in relation to the foregoing regulations and shall cause such instructions to be posted at all stations, terminals and section houses along its lines of railway. In case said instructions are not also carried in employees' time tables during said prescribed period, or in "operating" and "maintenance of way" rule books, they shall, previous to April 1st of each year, be re-issued to all employees con-



Fig. 8—Red Pine cones spread out to dry in the operation of extracting the seed.

cerned, in the form of special instructions. The Chief Fire Inspector may waive the above requirements in whole or in part, as to lines or portions of lines where, in his judgment, the fire danger is not material.

15. Every such railway company allowing or permitting the violation of, or in any respect contravening or failing to obey any of the foregoing regulations, shall, in addition to any other liability which the said company may have incurred, be subject to a penalty of one hundred dollars for every such offence.

16. If any employee or other person included in the said regulations, fails or neglects to obey the same, or any of them, he shall, in addition to any other liability which he may have incurred, be subject to a penalty of twenty-five dollars for every such offence.



17. The Board may, upon the application of any railway company or other party interested, vary or rescind any order or direction of the Chief Fire Inspector made pursuant to the provisions of this Order.

(Sgd.) H. L. DRAYTON,  
*Chief Commissioner,  
 Board of Railway Commissioners for Canada.*

BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

Examined and certified as a true copy under  
 Section 23 of "The Railway Act."

A. D. CARTWRIGHT,  
*Secretary of Board of Railway Commissioners for Canada.*

Ottawa, July 8th, 1913.

The following is a summary of the powers given the Officers of the Board of Railway Commissioners, under Order 107.

Control and inspection of fire protective appliances on locomotives.

Prevention of dumping of live coals, etc., along right-of-way.

Regulation of cleaning right-of-way.

Regulation of burning inflammable material along right-of-way.

Railway shall establish special patrol when and where necessary as required by the Chief Fire Inspector.

Reporting and extinguishing fires by regular railway employees.

In order to carry out a system of inspection for the enforcement of Order 107, a co-operative arrangement was entered into between the Board of Railway Commissioners and the Province of Ontario. Under this arrangement the Provincial Forester was appointed Provincial Fire Inspector, an Officer of the Board, without additional compensation, to act under the direction of the Chief Fire Inspector.

During this last fire season, eleven Divisional Inspectors were appointed to devote their whole time to detailed field inspection. The Divisional Inspector is appointed and paid by the Province but is also appointed an Officer of the Board clothing him with the necessary power to act. Mr. J. H. White was temporarily appointed as Assistant Provincial Fire Inspector to act during the fire season. Mr. White's assistance was very much appreciated and it did much to place this work upon an efficient basis.

These men covered the lines of the following railways running through forest regions: Canadian Pacific Railway; Canadian Northern Railway; Grand Trunk Railway; Algoma Central and Hudson Bay Railway; Algoma Eastern Railway and the Grand Trunk Pacific until the Ontario lines of this road were transferred to the Dominion Railway System.

It will be noted that the Board of Railway Commissioners has no jurisdiction over the Timiskaming and Northern Ontario Railway nor over the Transcontinental lines now a part of the Dominion Railway System.

In addition to the work of field inspection, these men inspected about 450 locomotives. This work is being done under the direction of the Operating Department of the Board.

The duties of the Divisional Fire Inspector can best be explained by the following memo. issued as part of their instructions.

7 L.M.



CIRCULAR FOR ONTARIO DIVISIONAL FIRE INSPECTORS OF  
BOARD OF RAILWAY COMMISSIONERS.

[This does not supersede the Memorandum sent out by the Fire Inspection Department of Ottawa, dated 14 April, but merely synthesises the more important points.]

Parliament Buildings, Toronto.

(a) *General:*

*The work called for* is (1) a checking up of the railway companies in regard to their carrying out the provisions of Order 107, and (2) the investigation of fires.

*The result desired* is the securing of protection from railway fires, and each divisional inspector is responsible for achieving this in his territory. This is possible through the powers conferred by Order 107 on Officers of the Board of Railway Commissioners.

*The method toward this end* should be one of co-operation with the Officials of the Company, not dictation or criticism.

(b) *Fires:*

(1) Arrange with the Railway Officials to be notified of fires. Knowledge of fires other than those you are concerned with should be transmitted to the nearest Crown Timber Agent and Chief Fire Ranger of the division.

(2) What fires to report:—All fires *that get within 300 feet of the track* should be reported in duplicate on the regular form, whether caused by railway or not, whether large or small, and regardless of damage. These fires will be of two classes: (a) those which *started within 300 feet of the track* and (b) those which started outside the 300-foot limit, but burned in towards the line to within this limit. In the case of the latter class of fires, this fact should be made clear in the report.

(3) *Investigation of each fire:*

(a) Determining the *probable cause* is very important; if it can be traced to a certain engine, wire the information collect to the General Superintendent of the line, and note this action in your report.

(b) Did railway employees comply with Regulation 13, (a), (b), (c), (d), (e)? [Insert this fact on Weekly Report Form, 6th last heading.]

(c) On the Fire Report Form give distance from track where fire started as exactly as possible; if this cannot be ascertained, state whether it started probably within or without the 300-foot limit. The *acreage* of each class of growth should be given, and *damage* for each class.

(d) A cursory investigation without getting the essential facts is time largely wasted; better take the time to find out what you are after. All information gathered as to cause, damage, etc., is private.

(c) *Right of Way:*

(1) All burning must be done under supervision by the Railway Company (Regulation 9).

(2) Any Board Officer can prohibit burning if proper supervision is not being given, or if he considers it too dangerous (Regulation 9).

(3) The principle to be followed is hearty co-operation with the Company to get all the debris burned up that can be reasonably risked.

(d) *Patrol:*

(1) Are all the requirements of the patrol letter of the Chief Fire Inspector being carried out by the Company?

(2) Relief should be granted in writing from requirements unnecessary owing to weather conditions.

(3) The matter of increased patrol, if in your judgment such is necessary, should be taken up with the local officials; if no action can be procured, notify the Toronto office of what steps you have taken, and what you definitely recommend.

(e) *Equipment:*

(1) Are patrolmen, velocipede men, and section (tool) houses equipped with fire-fighting tools, as indicated in the patrol letter?

(2) Are notices posted at terminals, stations and section-houses, as required by Regulation 14?

(f) *Locomotive Inspection:*

(1) This work is primarily not under the Fire Inspection Department of the Board, but under the Operating Department. However, by an arrangement between these two Departments, provision is made for the instruction in engine inspection work of Divisional Fire Inspectors by the Operating Department. Such Inspectors will, as far as possible, inspect fire protective appliances on engines, and report on Locomotive Inspection Form. This report is of little value unless for each engine it is stated exactly what appliances were examined, and what appliances were found defective.

(2) Examine the Company's round-house inspection book (Regulation 4).

(3) General complaints about the condition of engines are of little value; collect specific instances of defective engines, and arrangements will be made for a visit by an Official of the Operating Department of the Board, if the circumstances call for this action.

(g) *Weekly Reports:*

The idea behind the system of Weekly Reports is that this office may be in touch with the progress in all matters concerning each division. The reports should form a continuous account of all steps taken week after week by each Inspector in connection with the carrying out of Order 107, as indicated above. The headings on the form are selected with this end in view.

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Railway companies are waking up to the seriousness of the fire situation.

High stumpage values are making forest fires costly from the direct standpoint of damage claims.

Forest products give rise to freight, and forest fires destroy present and potential sources of freight traffic.

Additional cost of ties, poles and other forest products necessary in railway operation, have awakened railways to the necessity of conservation.

In some regions the scenic value of a right-of-way is a definite asset. Tourist traffic is an important source of revenue.

*Special Fire Protective Organization.*—All of the larger railways recognize that a responsible organization within the company must exist for adequate fire protection.

The Canadian Pacific Railway have a well defined fire protection organization with headquarters at Montreal for eastern lines.

The Canadian Northern Railway have a similar organization on lines west of Port Arthur.

A start was made for an organization on the Canadian Northern Ontario. This was only partially carried out this past season as many parts of the line were not organized for operation.

The Grand Trunk Railway placed a man in special charge of fire protection work upon lines in the Algonquin Park region.

Along with the development of a special fire protective organization within the company, we find a definite effort to educate the various officials and employees. While the Board of Railway Commissioners require a special Fire Prevention Circular to be posted (see Order 107, Sec. 14), some companies go far beyond this and are issuing special bulletins and letters to employees to make clear the importance of keeping down the fire loss.

*Right-of-Way Cleaning.*—Right-of-way cleaning is a problem which has been given considerable attention by our Inspectors. Along many lines old logs, stumps and other debris had been allowed to collect for years. This condition frequently made it difficult to put out small fires.

In many cases this cleaning up entailed more labour than the ordinary section crews could devote to it. In a number of districts, special gangs have been placed at this work. During this last season the Board have not felt like pressing this question too strongly, owing to the financial conditions of the period.

The Canadian Pacific Railway have devoted considerable special labour to this problem and their lines through the forest regions are in a very creditable condition.

The Grand Trunk Railway have made a splendid start on their lines throughout the Algonquin Park, Parry Sound and Muskoka regions, and debris which had lain for years has been piled and burned or is ready for burning. Through a co-operative arrangement, between the Grand Trunk Railway and the Province in Algonquin Park, the right-of-way and a protective belt adjacent has been cleaned up of all inflammable material. This work is being reported on by the Park authorities and I shall make no further reference to it. The necessity of the extension of this kind of work will be referred to later.

The Canadian Northern Ontario, arranged with the Booth Lumber Company to clean up certain portions of their line between North Bay and Pembroke.

There is still much to be desired in right-of-way cleaning by the Canadian Northern Ontario and I hope that during next season, when their organization is complete, this question will be satisfactorily undertaken.

*Patrol.*—The railway companies are required to furnish fire rangers or patrol. (See Order 107, Sec. 10.)

In ordinary conditions the section crews are instructed to cover this work, but where bad fire hazards exist, special patrol is called for by the Board.

The Canadian Northern Ontario had special patrol men on velocipedes between Ruel and Pembroke at sections where special protection was required.

The Grand Trunk had a special man on the Algonquin Park line. They also had a tank car equipped with a pump and one thousand feet of hose. This car was in charge of a man and was always ready to be rushed to any point where right-of-way fires were to be fought.

The Canadian Pacific had a number of special patrols during the fire season placed at dangerous sections where fire hazards were bad.

The Algoma Central and Hudson Bay Railway Company had twenty-two bridge watchmen between the Soo and Hearst, equipped with velocipedes, whose duty it was to do fire patrol work.



STATISTICAL REPORT OF RAILWAY FIRES IN ONTARIO, 1915, FOR THOSE LINES UNDER  
JURISDICTION OF BOARD OF RAILWAY COMMISSIONERS FOR CANADA, ORDER 107.

	C. N. R.	G. T. R.	C. P. R.	A. C.	Totals
<b>(a) Railway Fires:</b>					
1. Number, by causes:—					
(a) Locomotives .....	19	7	6	1	33
(b) Employees .....	4	1	20	1	26
(c) Total .....	23	8	26	2	59
2. Areas burned (acres):					
(a) Young forest growth .....	7½	2,062	783	.....	.....
(b) Timber land .....	3	5	3	.....	.....
(c) Slash or old burn .....	147	80	332½	626	.....
(d) Other classes of land .....	18½	½	6½	.....	.....
(e) Total .....	176½	2,147½	1,125½	626	4,075
3. Value of property destroyed ..					
(a) Young forest growth .....		\$427 00	\$100 00	.....	.....
(b) Standing timber .....		10 00	.....	.....	.....
(c) Slash .....		.....	150 00	.....	.....
(d) Other classes of land .....		.....	.....	.....	.....
(e) Forest products .....	\$1,580 00	74 00	411 25	.....	.....
(f) Other property .....	794 00	610 00	.....	.....	.....
(g) Total .....	\$2,374 00	\$1,121 00	\$661 25	.....	\$4,156 25
<b>(b) Known Causes other than Railway Fires:</b>					
1. Number due to:—					
(a) Tramps, campers, etc. ....	2	.....	2	2	6
(b) Settlers .....	9	.....	4	.....	13
(c) Other known causes .....	4	.....	.....	.....	4
(d) Total .....	15	.....	6	2	23
2. Areas burned (acres):					
(a) Young forest growth .....	1,275½	.....	19½	.....	.....
(b) Timber land .....	425	.....	40	.....	.....
(c) Slash or old burn .....	1,205½	.....	½	1	.....
(d) Other classes of land .....	204½	.....	.....	.....	.....
(e) Total .....	3,110½	.....	60	1	3,171½
3. Value of property destroyed:					
(a) Young forest growth .....	\$500 00	.....	\$70 00	.....	.....
(b) Standing timber .....	5,700 00	.....	56 50	.....	.....
(c) Slash .....	.....	.....	.....	.....	.....
(d) Other classes of land .....	200 00	.....	.....	.....	.....
(e) Forest products .....	.....	.....	.....	.....	.....
(f) Other property .....	8 00	.....	.....	.....	.....
(g) Total .....	\$6,408 00	.....	\$126 50	.....	\$6,534 50
<b>(c) Fires of Unknown Origin:</b>					
1. Total number reported .....	12	6	9	1	28
2. Areas burned (acres):—					
(a) Young forest growth .....	247	129½	11	.....	.....
(b) Timber land .....	1,500½	.....	.....	300	.....
(c) Slash or old burn .....	910	.....	.....	.....	.....
(d) Other classes of land .....	.....	5½	10½	.....	.....
(e) Total .....	2,657½	135½	21½	300	3,114½

STATISTICAL REPORT OF RAILWAY FIRES IN ONTARIO, 1915, FOR THOSE LINES UNDER  
JURISDICTION OF BOARD OF RAILWAY COMMISSIONERS FOR CANADA, ORDER 107.

	C. N. R.	G. T. R.	C. P. R.	A. C.	Totals
3. Value of property destroyed:					
(a) Young forest growth ....	\$12 50	\$252 00	.....	.....	.....
(b) Standing timber .....	12,002 00	.....	.....	.....	.....
(c) Slash .....	.....	.....	.....	.....	.....
(d) Other classes of land .....	.....	.....	.....	.....	.....
(e) Forest products .....	.....	2,488 16	\$5,000 00	.....	.....
(f) Other property .....	2,300 00	25 00	7,600 00	850	.....
(g) Total .....	14,314 50	\$2,765 16	12,600 00	850	30,529 66
(d) Grand Total:					
1. Total number of fires .....	50	14	41	5	110 00
2. Areas burned (acres):					
(a) Young forest growth ....	1,530	2,191 $\frac{1}{2}$	813 $\frac{1}{2}$	.....	4,535
(b) Timber land .....	1,928 $\frac{1}{4}$	5	43	.....	1,976 $\frac{1}{2}$
(c) Slash or old burn .....	2,262 $\frac{1}{2}$	80 $\frac{3}{4}$	333	927	3,603 $\frac{1}{4}$
(d) Other classes of land ....	223 $\frac{1}{4}$	5 $\frac{1}{4}$	17 $\frac{1}{4}$	.....	246 $\frac{1}{4}$
(e) Total .....	5,944 $\frac{1}{4}$	2,283	1,206 $\frac{1}{4}$	927	10,361 acres
3. Value of property destroyed:					
(a) Young forest growth ....	\$512 50	\$679 00	\$170 00	.....	\$1,361 50
(b) Standing timber .....	17,702 00	10 00	56 50	.....	17,768 50
(c) Slash .....	.....	.....	150 00	.....	150 00
(d) Other classes of land ....	200 00	.....	.....	.....	200 00
(e) Forest products .....	1,580 00	2,562 16	5,411 25	.....	9,553 41
(f) Other property .....	3,102 00	635 00	7,600 00	850	12,187 00
(g) Total .....	23,096 50	\$3,886 16	13,387 75	850	41,220 41

Notice that the statistical report takes into account all fires originating upon a zone six hundred feet in width, that is, we receive reports upon all fires originating within three hundred feet of the railway track. (See Order 107, Sec. 13, Subsec. E.)

Fifty-nine fires were of known railway causes, doing a total damage of \$4,156.25.

Twenty-three fires were of known origin other than railway cause, doing a total damage of \$6,534.50.

Twenty-eight fires were of unknown origin, doing a damage of \$30,529.66.

This gives a total of 110 fires originating within the six hundred foot zone and a total damage of \$41,220.41.

In the values assessed for fire loss in the above report, no estimate is placed upon soil injury which in many cases is the most serious and permanent loss.

In justice to the railways, I wish to point out that two of the serious fires, namely, the \$7,600 and the \$5,000 fire occurring along the Canadian Pacific Railway were of unknown origin. The \$7,600 fire was a saw-mill and the \$5,000 fire was cord wood piled along the right-of-way. Neither of these fires can be classed as forest fires.

In addition to fires given in the above statistical report our Inspectors reported thirty-six fires which came into the railway zone from outside. The bulk of these were caused by settlers starting fires in a dangerous season and not con-

trolling them. Our Inspectors are instructed to keep a record of these outside fires so that they cannot be confused with fire originating within the railway zone.

Two serious problems confront us in the development of this work, namely:—

The lack of control of settlers' fires.

The condition of the territory adjacent to the railway right-of-way.

The Board of Railway Commissioners is insisting upon the railways cleaning the right-of-way of all inflammable material, yet in many districts fire traps exist in close proximity to the boundary. Some effort should be made to compel adjacent owners to assist in cleaning a protective belt outside the right-of-way. No matter how clean a right-of-way may be kept it will be a physical impossibility to prevent forest fires when fire hazards exist just outside the railway right-of-way.

In many cases small right-of-way fires could be reached and put out in time if it were not for the fire hazards adjoining the right-of-way.

We recognize that the past season was not an extremely bad fire season, owing to the large amount of rainfall. However, with the perfecting of railway fire protective organizations, forest fire loss, such as existed in years past, should be largely eliminated.

Respectfully submitted,

E. J. ZAVITZ,

Forester.

Minister of Lands, Forests and Mines.  
Ontario.











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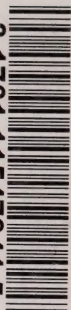
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